

AMERICAN BUILDER

AND
BUILDING
AGE

THE WORLD'S GREATEST BUILDING PAPER

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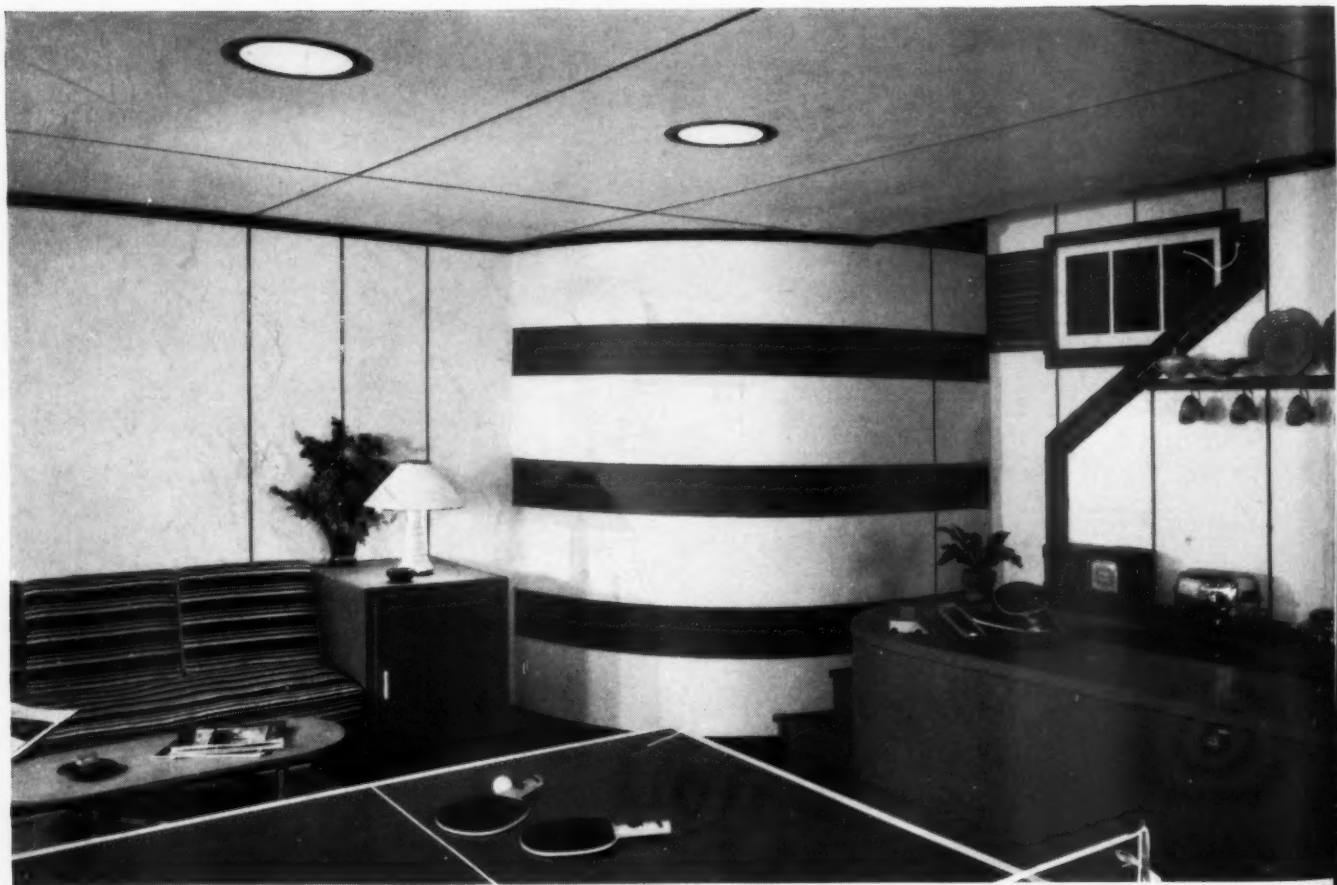


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and Building Age

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Eastern Editor

R. E. SANGSTER
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New Low-Cost Factory-Finished Flooring RESISTS SCRATCHES... HAS BEVELED ENDS AND EDGES!

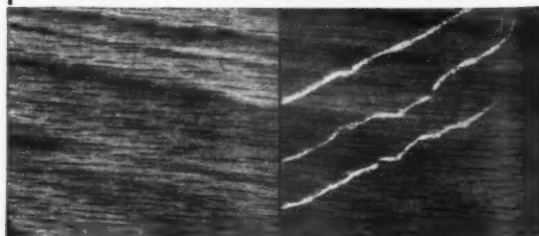
● Now, you can give home owners a factory-finished hardwood floor that will *stay* beautiful for years to come! And no wonder! Bruce STREAMLINE Flooring is finished a scientific new way that penetrates the pores of the wood... gives floors a tough, lustrous, lasting finish that wears with the wood. That's why it doesn't scratch, chip or peel like ordinary flooring finished the old style surface way. What's more, this amazing new flooring usually costs less than ordinary flooring finished on the job.

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the gracefully beveled ends and edges, and the generous width of the strips ($3\frac{1}{4}$ "). This new idea creates a shadow "patterned" effect that gives floors an appealing new beauty like that of expensive plank floors.

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"BRUCE-WAY"

SURFACE FINISH

Send for this "Scratch Test" Panel. Half is finished the new "Bruce-Way" used on STREAMLINE Flooring—other half finished the ordinary surface way. Scrape a coin across both finishes. See how the ordinary surface finish scratches and chips away, while the "Bruce-Way" finish is unharmed.



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Name.....

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PUBLISHER'S PAGE

For Increased Building Employment

A new book on "Housing" by Dr. E. E. Wood published by the Federal Works Agency, Washington, D. C., presents a chapter entitled, "Housing Shortage in 1938 and Probable Needs to 1950." It concludes that a total of 13,279,000 family dwelling units should be built during this present decade if the nation is to keep pace with population growth plus new housing demand arising from demolition and obsolescence.

This is probably the largest figure yet offered, based on authoritative studies, gauging the size of today's *potential* home building program. *One million three hundred thousand* new home units **ANNUALLY** for the next ten years is about three times the number of new home units built last year.

THE need was present last year, and continues to face the building industry today.

Funds for building these needed homes are ready, and are available at the lowest rates and most favorable terms in this nation's history.

Materials and equipment for these buildings are on hand, with industry tooled to supply all additional needs.

Building labor is ready waiting to be employed; in fact, the thousands of unemployed and only - part - time employed building trades workers are perhaps the country's biggest obstacle to economic recovery.

The need, the money, the materials and the men are all present. They call for a tremendous home construction program. Yet building scarcely moves forward. The early months of 1940 are just about holding their own with 1939, to say nothing of the 300 per cent increase pictured by Dr. Wood and other survey authorities.

WHAT is the "precious ingredient" in this situation that is lacking?

Well, it is probably *confidence*. The man who must risk the investment in a new home for himself and family or in a group of houses or an apartment for rent can not be assured today that his risk would be justified. He finds that building

costs are too high as compared with other costs, especially rents, and as compared with average incomes. He finds that property owners are menaced by increasing taxes, and by the competition of tax-exempt and tax-supported government housing.

Labor "trouble" and labor restrictions that add to building costs are destructive to his confidence and so retard this much needed home building program; and responsible labor leaders might well give thought to sponsoring more actively some broad policies that would put Labor solidly behind the present drive for more and better low cost homes and for fairer taxes on them.

As a suggestion for such policies, why not take these eleven points, established twenty years ago by Judge K. M. Landis in Chicago when he adjudicated a critical building trades deadlock:

1. Peaceful adjustment of labor disputes by arbitration.
2. No stoppage of work either individually or collectively under penalties prescribed.
3. Any journeyman may use in his work the tools of any other trade.
4. Shift work will be paid at the regular rate.
5. Contractors not affiliated with associations may avail themselves of all benefits by joining association.
6. There shall be no restriction of output.
7. There shall be no restriction as to the use of machinery, methods or appliances.
8. There shall be no restriction against any raw material or manufactured material except prison made.
9. Employers may employ or discharge whomsoever they please and employees may work for whomsoever they see fit.
10. The foreman is to be exclusively the agent of the owner.
11. Nothing shall prohibit an employer or one member of the firm from working on his own job.

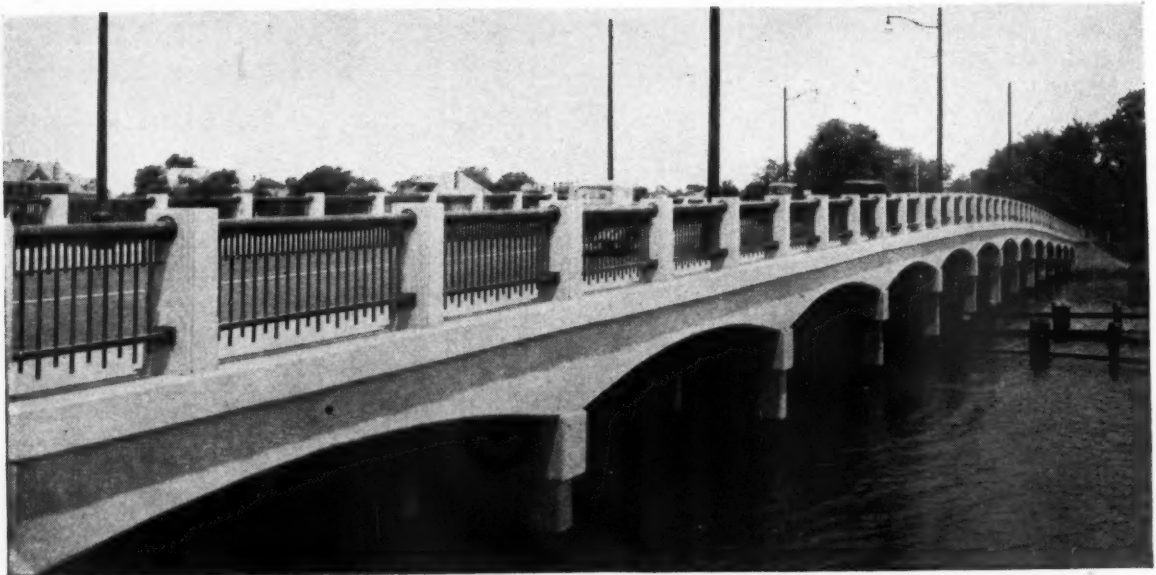
Increased confidence among small investors, increased volume of home building, increased and steadied building trades employment, increased prosperity and benefits for all would certainly result if these "Landis Award" principles could be generally adopted.

Samuel O. Dunn

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THAT COOL SPRING NIGHT

Frost Hazard



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'Incor' 24-HOUR Cement means just what the name says—uniform, dependable 24-HOUR service strength. AND LONG-TIME DURABILITY, TOO—proved by 13-year performance record . . . a vital advantage EXCLUSIVE with 'Incor', the FIRST high early strength Portland Cement. Quality pays . . . because better cement makes better concrete.

SAVE TIME, MONEY, WORRY

GET LONG-TIME DURABILITY

USE 'INCOR' 24-HOUR CEMENT

SPRING is fickle . . . temperatures drop suddenly, exposing concrete to freezing risk. Save time, money, worry. Use 'Incor' 24-Hour Cement . . . heat mixing water . . . protect the concrete promptly after placing. 'Incor' hardens and cures 5 times as fast—is safe from freezing that much sooner. For 24-hour service strength, supply enough heat to maintain curing temperature at 60° to 70°.

This better quality 24-Hour Portland cement means better concrete, too. Tidewater Construction Corporation used 'Incor' on the new 13-span Lafayette River Bridge at 26th Street, Norfolk, Va. Working straight through the Winter, 'Incor' cut heating costs, speeded completion, reduced job overhead. And they didn't have to touch the under-side of the arches—because of 'Incor's workability.

Dependable high early strength plus long-time durability—proved by 'Incor's 13-year service record. Use 'Incor'*—you'll be money ahead if you do. Write for copy of booklet entitled "Cutting Concrete Costs." Lone Star Cement Corporation, 342 Madison Avenue, New York.

*Reg. U. S. Pat. Off.

LONE STAR CEMENT CORPORATION
MAKERS OF LONE STAR CEMENT . . . 'INCOR' 24-HOUR CEMENT

AMERICAN BUILDER

AND BUILDING AGE

No DICTATORSHIP on Long Island

HOME building flourishes on Long Island because few of the restraints, restrictions and labor dictatorships that plague many metropolitan areas have been allowed to obtain a strangle hold there.

Long Island is one of the fastest growing home communities in the world because its builders are giving home buyers *good houses at low prices*. They are able to do so because they have strenuously resisted anything that tends unduly to increase home costs. Such a condition doesn't "just happen." It is the result of a constant battle on the part of vigorous and experienced building organizations that fully realize that *the only way the home building industry can prosper is to keep constantly giving the public a higher value house at a lower price*.

Take the matter of labor and unionization. Long Island builders pay their workmen well—higher than average. But they have strenuously resisted unionization because they object to the restrictions on output and other union regulations that would reduce efficiency. They say that unionization would raise the selling price of the average Long Island house 30 per cent. It is not an increase in hourly wages that would do this, they say, but such possibilities as the 30-hour week, limitation of output, rules against use of power equipment and other union red tape, restrictions, regulations and discriminations.

Most Long Island builders feel that they had a good object lesson in what happened to one of their prominent operators when he opened a new development in highly unionized Westchester County. This builder—one of the smartest and most efficient operators on the Island—started a 100 per cent union job in Westchester. He built 100 houses—and abruptly quit. He ran into so many obstacles, he said it wasn't worth the trouble. An identical house that he built on Long Island to sell for \$8,500 had to bring \$11,500 in Westchester. He got out, and that community and its workers and its business men lost an opportunity to have hundreds of new homes.

New Ideas Catch on Quickly

Other factors contribute to favorable home ownership conditions on Long Island. Taxes are reasonable. Building codes, while strict enough to protect the home owner, do not unduly interfere with the use of new and improved products and materials and methods. Competition is keen enough all along the line to satisfy the most ardent exponent of free and unrestricted competition as a factor in bringing about lower prices. Most material men, in fact, will claim that it is carried a bit too far.

Operative builders on Long Island have one of the largest, most prosperous metropolitan populations in the world to draw from. Their prospects are as typical as a cross section of the United States. Credit must be given them for their willingness to accept new ideas and their quickness to adapt them to the job of producing and selling better homes at lower cost.

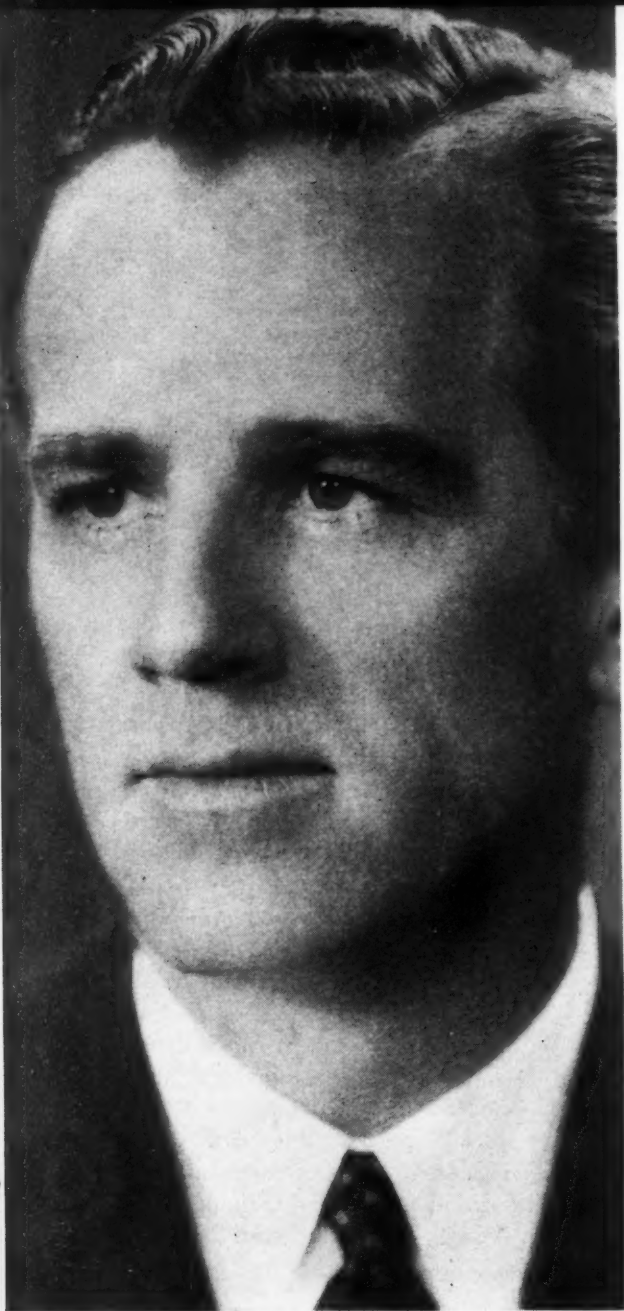
Care must be taken in generalizing about Long Island builders. There are those who specialize in low-priced homes for the mass market in the more heavily built-up areas. There are an equal number who build better looking houses farther out in beautiful wooded surroundings. There is a vast volume of low cost row house construction, but also some of the finest "small estate" home building in the world is on this 118-mile island. Contrary to general opinion, building is not concentrated in the hands of a few big operators but is spread out among a large number—probably 1,000 or more.

As a perusal of this special Long Island issue of *American Builder* will show, most of the successful builders there in any price class are men of sound training, long experience and ability. A surprising number are the sons and grandsons of builders. A dozen of the most spectacularly successful home developments involving many hundreds of homes are being run by intelligent college-trained young men. They have set high standards of construction, have employed the most competent architects and land planning experts. They are putting attractively styled houses on large plots of ground—frequently a third and half acre.

Smart Merchandisers Also

From the first inception of FHA, Long Island builders have been quick to appreciate its possibilities. They have eliminated the excessive financing charges that to this day are maintained by many lending institutions in other parts of the country. They have obtained an interest rate of only 4¼ per cent—probably the lowest in the country.

Coupled with all of the above, Long Island builders have realized that it takes smart merchandising to sell homes. They have not been afraid to install those "extras" in items of equipment and materials that catch the prospect's eye. The result is that Long Island homes are colorful, well equipped and salable. All of which adds up to the fact that home building flourishes where a determined effort is made to keep it free of restraints and where the builder consistently gives the buyer more quality house for his money.



ARCHITECT ARTHUR E. ALLEN

THE 1940 home builder is on the spot. Hemmed in by building codes, FHA construction standards, and various mortgage requirements, he is besieged by competition and faces the problem of giving the home buyer more quality house for his money, *or else*—

"Blame the architect" has become a favorite indoor sport for the builder, and justifiably so. In the good old days when builders could concoct homemade plans out of a book and build and sell rows of undistinguished boxes, they regarded architecture in the way a bachelor considered a wife—an expensive luxury.

But lately it has been discovered that expert planning can result in more house value, cheaper to erect, and the architect is recognized as being worth his salt. For the architect now shows the builder how to save legitimately on material and labor costs and still create more livable and comfortable space in a home than his competitors can produce.

The man in the street may look at the green shutters of a Cape Cod bungalow and exclaim: "Charming architecture!" The experienced builder on the other hand can balance himself on the floor beams of a house being

We Draw Economies into Our PLANS

**More Quality Homes for the
Money Is Long Island Objective**

By Arthur E. Allen, R.A., A.I.A.

EDITOR'S NOTE—Arthur E. Allen, not yet 40 years of age, has designed more private dwellings than probably any other architect in this country. He has been responsible for the planning of more than 22,000 homes that have been built and sold in the Long Island suburban section of New York. Homes built from Allen plans would house the entire city of Mobile, Ala., Topeka, Kans., or Portland, Me., figuring less than 4 members per family.

Last year Mr. Allen filed 2,420 individual plans for small houses. He specializes in architecture for the large scale speculative home builder and keeps in close touch with home buying trends. His office in Jamaica is in the heart of the "fastest growing island" in the country.

framed and pronounce it: "Cleverly planned." Why? Because exterior design is comparatively unimportant in the cost of a house. The layout of rooms, to render a maximum of the cubic content usable and attractive, holds the secret of cost. It is just about as cheap to dress up an exterior in half-timber stucco English style as it is to create a simple frame Colonial facade. All-brick or half stone may run slightly higher in most localities, but their use often can be justified by popular preference.

The first place to start saving in the plan and construction of the small house is in excavation and foundation. The most economical plan of construction is naturally a rectangular or square house with no breaks in its perimeter. This becomes apparent immediately in foundation work. For example, a small house measuring about 20 feet wide and 30 feet deep will have a perimeter of 100 feet and cover a total area of 600 square feet. If one corner of this house is to be left unexcavated for a set back of about 5x5 feet, the perimeter of the foundation work will still be 100 feet and yet the house will be smaller by 25 square feet.

Floor Beams' Control Room Size

The next point in which careful planning can save dollars and cents in materials and labor is in floor beams. Arbitrary room sizes necessarily entail a considerable waste of material and labor time in cutting down floor beams from their standard multiples of 2 feet. When beams can be purchased in lengths of 8, 10, 12, 14 feet, etc., it is more expedient to plan a room width of 13' 4" in the rough, for instance, than to plan it 13 feet wide or 12½ feet or 12. Since a bearing of 4 inches is required on each end of a floor beam, a standard length of 14 feet can be used without cutting beams down and a room width of 13' 4" can be obtained. If a room is planned to be

(Continued to page 144)

Builders Tell the World

FIRST you need a good product; then you have to tell the world about it. How can you do this best? Long Island builders say that smartly designed, well located signs are the answer.

Like any other job, designing and making signs is the job of a specialist. Several of the signs of one such firm—Cameo Sign Service

of Brooklyn, N. Y., are shown on page below.

Naturally, the character of a sign must be determined by the character of the development or the people desired as customers. The Trump Homes advertisement below is one of Cameo's masterpieces, tying in with the New York World's Fair and appealing to buyers in

(Continued to page 130)

61





THE breakfast bar in this Gross-Morton home separates kitchen and dining nook—and do the girls like it! At night hubby finds the bar convenient for the serving of liquid refreshments.

WHETHER you call it Chi-Chi*, oomph, eye appeal or just smart merchandising, Long Island builders never miss a trick. They not only give the buyer more **QUALITY** house for the money, but throw in a host of specialty equipment and lighter luxury items that make the housewife's life more gay and exciting.

A direct about-face in sales philosophy has been made by the top-flight, successful speculative builders on Long Island. From the theory of giving the buyer as little as possible in the way of extras, he has swung to the practice of dressing up his house with almost everything that has tempted the public in magazine advertisements in recent years. In doing this the builder has discovered that even though in some cases additional equipment dictates a slightly higher price, *he can sell his house faster than his competitor and build more of them.*

They're Romance Bound

A package—the window dressing—a dash of showmanship—are factors that sell houses as readily as motor cars are sold by their chromium accents, streamlining, cigar lighters, radios, heaters and bright paint colors. For the average family is romance-bound when looking for a new home. Flowers in window boxes, mirrors in baths and dressing rooms, cheerful wall papers, mean more to the average prospective home buyer than such substantial details as three coats of plaster, poured concrete foundations and steel lally columns, all of which happen to be more or less standard under our building codes and mortgage requirements.

Many a good builder still feels that honest construction marks the limits of his jurisdiction. He feels that

*Chi-Chi (pronounced Chee-Chee)—popular fashion term for things that are super-chic or dressed up.

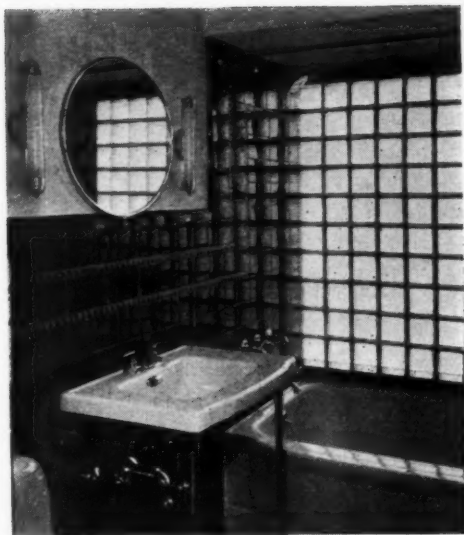
BUYERS RESPOND to the Unusual in Home Fittings

sensible buyers will appreciate being left free to select their own extras according to individual preferences. Automobile builders felt that way about self-starters around 1912 and 1913, when headlights were extra, and so were bumpers and tops and even tires. The home builder in this frame of mind calls his competitor's trimmings "gadgets" and he can't understand why his own houses will not sell as fast.

However, "gadget" proves to be a misnomer. In a floodtide demand for modern conveniences, the public will not be damned. A crystallization of popular preference for oil burners has prompted Green Park Estates, for example, to include them in the purchase price of 850 homes being built. The younger generation's love of shower baths has guided the Gross-Morton Corporation in providing sliding glass panels in front of bathtubs in cases where separate glass-enclosed stalls are not expedient. Such items of equipment are not gadgets. They are salesmen—veritable robots—they speak for themselves.

Enter the "Hollywood Bath"

The colored tile bath with harmoniously colored fixtures is standard today through almost every price class on Long Island. It includes, in addition to the inevitable Venetian mirror medicine cabinet, a built-in laundry hamper, an ample array of built-in accoutrements such as towel racks, tooth brush holders, soap containers,



CIRCULAR mirrored medicine cabinet, tubular lights, glass block and glistening tile put sales punch in this streamlined bathroom by Levitt.

Eye Appeal and Sex Appeal Items Help L.I. Builders Sell Homes. Find Extra Conveniences Pay Their Way

By David George Bareuther

and in some cases built-in scales for the ladies who are worried about their diets. Newell & Daniel and Shorehaven, among others, have given some of their bathrooms an outer wall of glass brick to offer the most

SALES BOOSTERS

circular mirrors
glass shower doors
chromium closet fixtures
flower boxes
glass blocks
talking doorbells
closet hinge switches
tubular lighting
Hollywood baths
built-in aeriols
breakfast bars
electric door chimes
dish-washer
garbage disposer
automatic garage doors
colorful wall papers
extra telephone plugs
electric clocks and fans
package receivers
laundry chutes

timid soul the privilege of a shower in the sun. Sutton Park at Lawrence, L. I., devotes the entire wall above the bathtub to an enormous mirror. The United Associates, without a Roman on their staff, introduced the sunken bathtub in \$6,000 houses where they featured "Hollywood Baths."

Man-size bathrooms are not confined to any definite price class. They are found big enough for both tub and shower stall with plenty of elbow room for a brisk rub-down in the \$6,000 Gross-Morton home, the \$8,000 houses at New Salem, the \$10,000 to \$12,000 Walter Uhl creations at



SHOWER STALLS with glass doors are common practice on Long Island even in the lower price range. This Gross-Morton bath also features colorful tile, wall decorations and chrome trim.

Flower Hill, and the \$15,000 to \$25,000 residences of Munsey Park.

Munsey Park, by the way, an independent village of more than 400 homes built in the past ten years, recently demonstrated the "talking doorbell," a Western Electric contrivance. This makes it possible for the housewife to converse with the Fuller brush man via house phone from kitchen or upstairs hall.

Telephone base plugs to accommodate portable phones, which can be transplanted to guest room, boudoir, or nursery in the manner they are passed around tables at swanky restaurants, are worth keeping an eye on. They were installed in the large country homes at Sterling Ridge in Westchester and we shall see the day when they are no more of a luxury than the stationary telephone is today.

But to get back to the popular price field, a base plug that is common in the new Long Island homes is the radio outlet. This supplies both ground and built-in aerial contacts in the same way that it does in modern city apartments.

There is virtually no detail of extra equipment that the progressive builder can afford to overlook. Chromium closet fittings amaze the prospect and they cost little more than the usual painted clothes pole and haphazard hooks. Shoe racks, hat racks, tie racks are worth many times their cost when installed in a house. Clever builders have placed a few hooks high to keep evening gowns from dragging. Closets that are illuminated automatically by means of a hinge switch as the door is opened, cedar lined closets, triple doored wardrobes with three full length mirrors for dressing—all are to be found in the new Long Island speculative homes.

Crystal chandeliers, indirect lighting from mouldings, pinhole flood lights for dining room tables, tubular

(Continued to page 132)

FHA and the FACTS

about Long Island home building standards

By Joseph B. Mason

SINCE the Federal Housing Administration insured its first mortgage on a residential property on Long Island in December 1934, vast changes and improvements have taken place in this "fastest growing community."

There is incontrovertible evidence to the fact that Long Island operative builders are selling better built homes, better equipped and providing more real value for the home buyers' money than ever before.

Credit must be given to the FHA, its New York State Director, Thomas G. Grace, and his able assistants. They have been faced with the demand on one hand for lower-priced houses to reach a constantly enlarging market, and on the other hand with possible criticism if they allowed home construction standards to drop. In the face of this devil-and-the-deep-sea situation, they have followed a course that has resulted in higher standards of construction, while at the same time there has been a large increase in volume. Approximately 20,000 new homes have been insured by FHA on Long Island.

Construction and land planning requirements for Long Island homes are among the highest of any FHA region.

Land Planning Improvements

Most spectacular improvement—as photographs in this Long Island issue clearly indicate—has been the vastly improved community planning and subdivision layout. Not only are the Long Island houses of today on much larger, better-value plots, but the subdivisions themselves are much better laid out.

The trend towards larger plots has been a constantly accelerating one, so that today many of the most successful builders have been buying up estates and placing houses on wooded plots of one-quarter, one-third and one-half acres. Vast new areas of beautiful

Why Buyers Get More QUALITY House for the Money Today

1. Larger plots, wider street frontage, better laid out communities.
2. Better architectural design and more variety.
3. Improved interior planning, with better circulation, lighting, exposure, privacy of sleeping quarters.
4. Improved heating plants guaranteed by certificates from both manufacturer and plumber; automatic controls.
5. Copper and brass plumbing and flashing.
6. More substantial footings, foundations and thorough waterproofing.
7. Additional strength in floor beams, rafters and framing. Better quality lumber throughout.
8. Diagonal sheathing, more insulation, fire stops and fire-retarding construction.
9. More efficient equipment and conveniences.

wooded Long Island countryside are now being opened to development, with land costs greatly reduced. The result is that the Long Island home buyer of today gets attractive homesites in highly desirable "estate" surroundings at prices that would have been considered impossibly low a few years back.

Thomas G. Grace, New York State Director, is a dynamic, witty Irishman who has made many friends and achieved results all along the line. He has been well assisted, in the Jamaica district office where most of the Long Island work heads up, by

Stanley R. White. The processing of more than 272 million dollars of insurance commitments—which is their record to date—is one of the biggest jobs done by FHA anywhere in the country.

Contrary to usual beliefs, all Long Island building is not concentrated in the hands of a small handful of builders. FHA records show that there are approximately 250 operative builders who have put up developments of 25 houses or more. *American Builder* estimates that there must be more than 1,000 fair-sized builders on the Island.

Kings, Queens and Nassau counties, located as they are close to one of the greatest concentrations of population in the world, get the bulk of the new construction. Since 1934 Queens county has had a 400,000 increase in population and Nassau county 125,000.

The combination of a large population, a co-operative minded FHA, smart and energetic builders, and equally smart and energetic financial institutions has resulted in the tremendous building development that has taken place on Long Island in recent years. Not only were the Long Island builders first to appreciate the opportunities offered by the FHA program, but many financial institutions were equally alert. While big bankers faltered, institutions like the South Shore Trust Company of Rockville Centre, Baldwin National Bank, Franklin

(Continued to page 134)

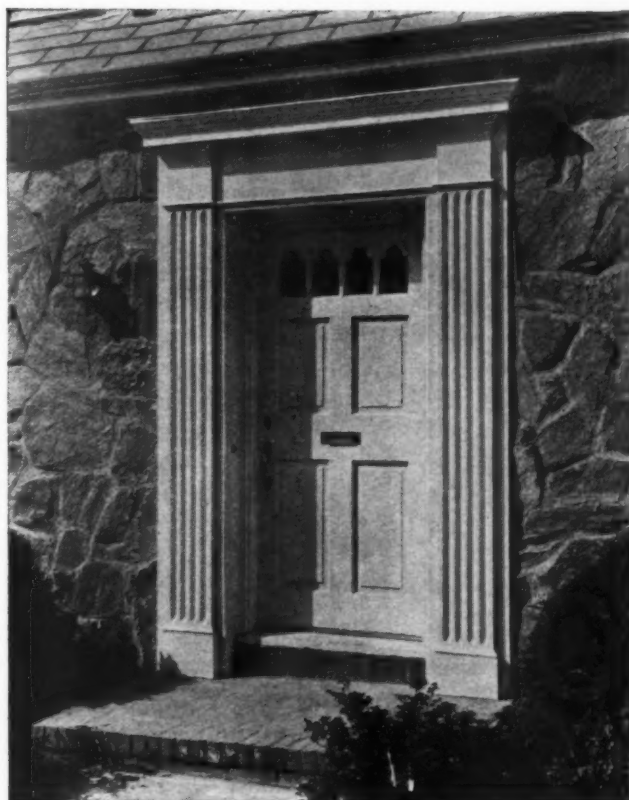
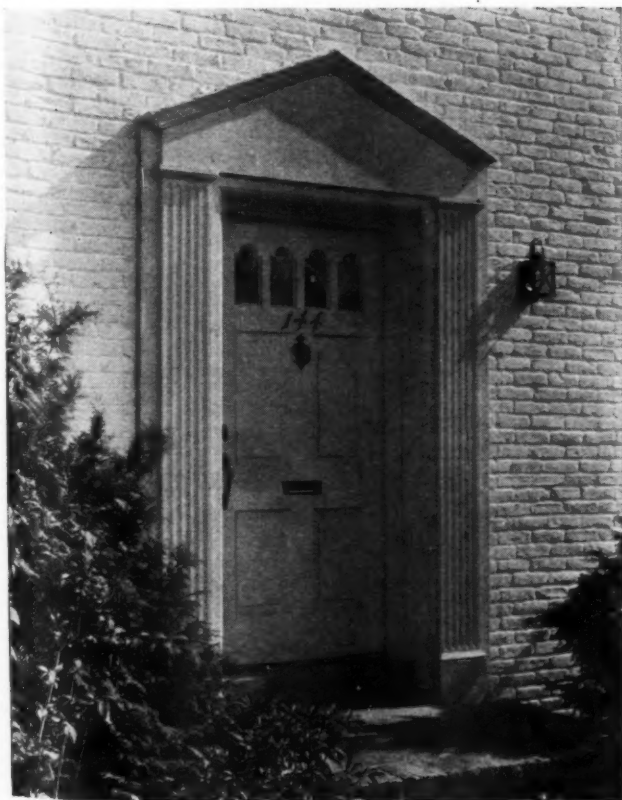
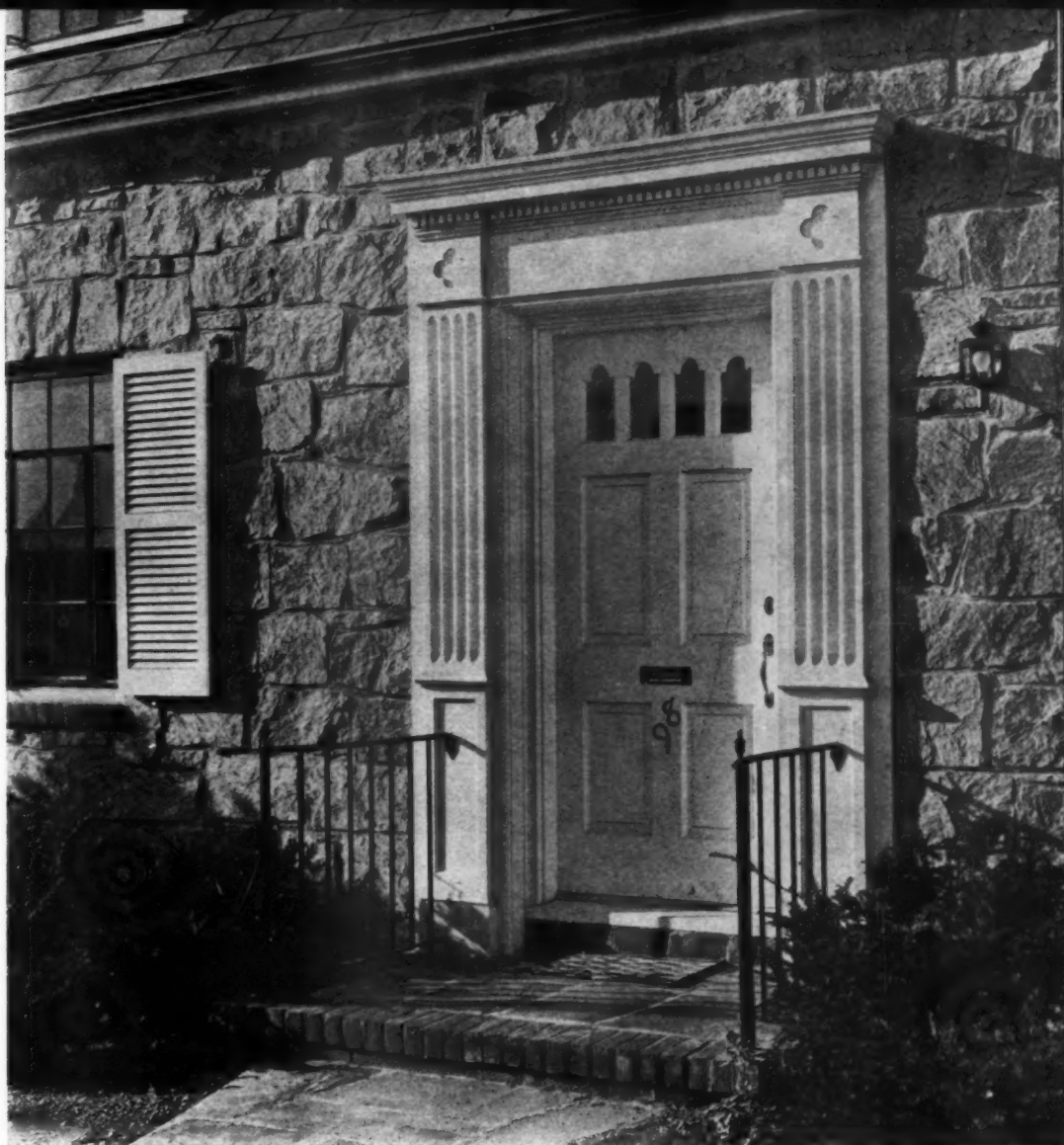


THOMAS G. GRACE, New York State FHA Director.

Long Island First Impressions

LONG ISLAND builders have a way of putting their best foot forward—and in this instance it is the front entrance. These are three of the most recent creations of the architectural department of Mott Brothers, Inc., and they illustrate to a high degree the quality, style and good taste of the successful Long Island builder.

CLOSE inspection of these Mott entrance details shows not only beauty of design and proportion but attention to weathertightness, flashing, caulking and a long-lasting paint job. They are the product of years of sound building.





MODERATE-PRICED Mott specification home in Flower Hill, Long Island, in attractive wooded setting.



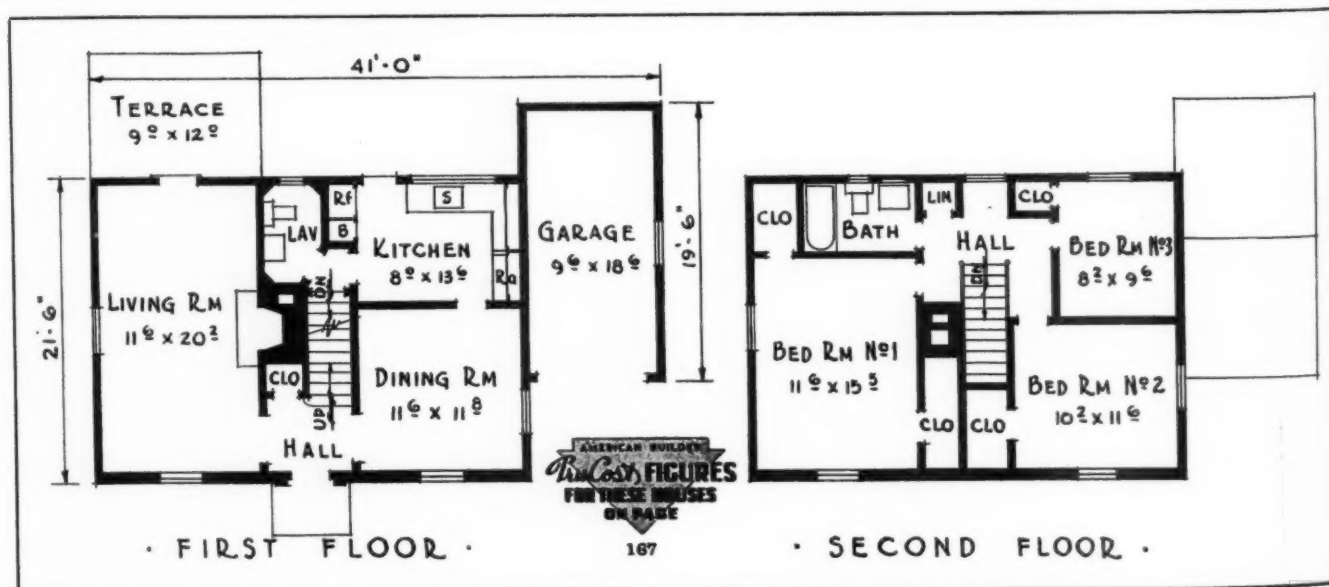
HAROLD B. and EDWARD C. MOTT.

Mott's Quality Specifications

Product of 3 Generations of Building on Long Island. Firm Now Extending Unique Service to Other Builders

FOR three generations the Mott Family has been prominently identified with the building industry on Long Island. This is the background of the present large Mott Brothers' organization which is today headed by Harold B. and Edward C. Mott, who, in the course of the past 17 years, have built thousands of houses.

Even during the deepest depression days, the Motts kept on building and selling houses. As a result, they stored up a wealth of knowledge, and developed an organization which has enabled them to give extraordinary house value for the money. During this period of years, the Motts built up a complete and detailed set of specifications, adherence to which assures the



FLOOR plan of one of the smaller Mott specification homes, as illustrated above. Other exteriors for same plan shown on page 142.



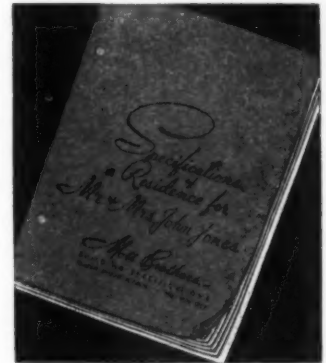
SMARTLY styled Mott Colonial at Flower Hill, Long Island, with attractive garage-porch extension.

house buyer of a good job and also eliminates the usual controversies which often arise between the builder and customer. Covering some 56 closely typewritten pages, these specifications deal with all phases of the construction operations. They not only indicate what is wanted and what materials and equipment will be used, but also describe in detail how the work will be done. Special forms are provided for the designation of the type and color of equipment selected for each room. Every item receives careful attention. Included in these specifications for each house there is a guarantee effective for one year against faulty materials or work-

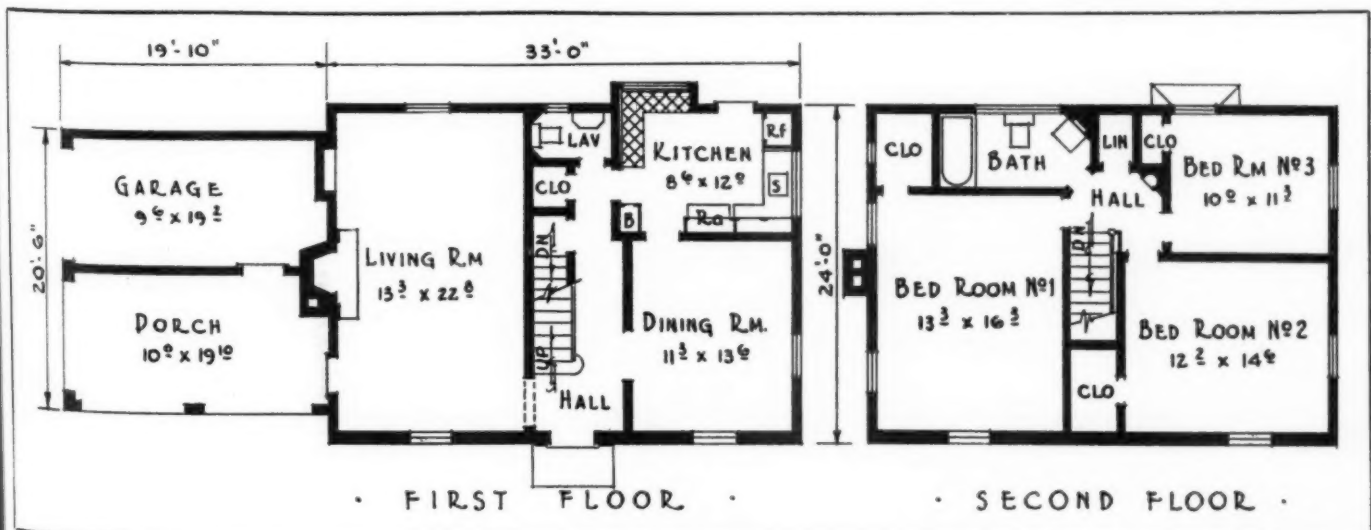
manship. Each buyer is given a copy of these extensively detailed Mott Brothers' specifications with his name inscribed on the cover, as documentary evidence of the high standard of construction in his house. This also serves as a valuable reference for future appraisal, resale or alteration.

Also in the course of the development of their business, the Motts built up an excellent architectural and decorating staff which, by working closely with each home buyer, lends effective aid in the proper selection of color, interior finishes, equipment, etc., to the end that everything going into the house harmonizes artistically.

(Continued to page 142)



MOTT specifications cover 56 pages of closely written type.



A SPACIOUSLY planned, beautifully designed home in Mott's middle-price range. Center hall arrangement good.



FINE craftsmanship and good architectural design typical of the better Long Island builders are shown in this interior of a Mott specification home. The built-in bookcases, simple random width paneling and nicely detailed dentil contribute to its success.



Mott Long Island Interiors

YEARS of successful operations have convinced Long Island builders of the value of good architectural design as well as good interior decoration. Mott Brothers maintain an expert architectural staff as well as an interior decorator, who works out color schemes that "hang together" and give the buyer lasting satisfaction.

FIREPLACE niche, at left, is an attractive example of an interior architectural detail that gives Mott homes charm and salability.



Photos by Cyril Lamplough

PINE paneled interior in this Long Island home built to Mott specifications has a light stain and wax finish. Fireplace is nicely styled.

MIRRORED fireplace, at right, gives this Mott living room an added sense of size. The white trim contrasts with the black fireplace facing.

AT far right is shown a more classic type of Mott fireplace detail with marble front and decorative mantel. The dentil treatment at ceiling gives an attractive and decorative touch.

More Quality House for the Money





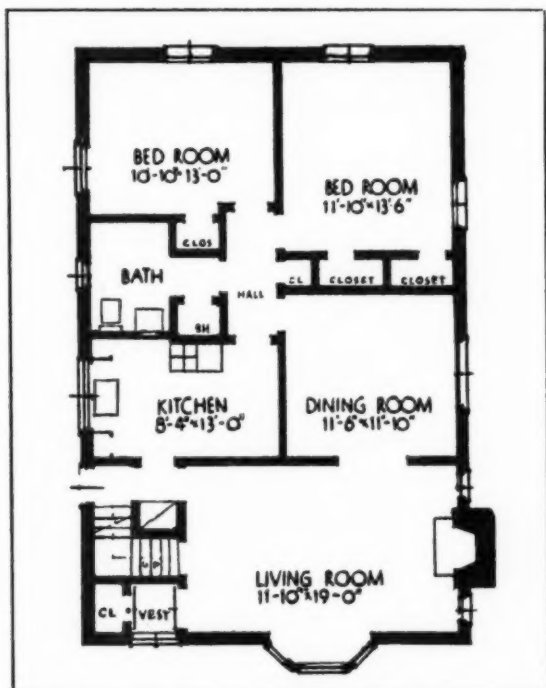
INSULATING sheathing board is used on all Gross-Morton homes.

the Gross boys, who is in charge of construction. The Gross boys are sons of a Queens County builder, and before entering the building business in 1921 attended New York University and City College where they took courses in commerce and engineering. Their biggest year was in 1928 when 929 houses were built in their 3,000-house Laurelton development.

Operations of Gross-Morton firm come the closest to the "mass production" methods talked about by the so-called housing "experts" of any building operation. The building operations are broken down into a large number of sub-contracts, each highly specialized. The close-knit Gross-Morton organization has little waste motion or overhead of any kind. Salesmen are on a direct commission basis. Over a period of years standardized methods, materials and buying power have kept costs at a minimum while giving the home buyer greater and greater value for his money. The Gross-Morton \$6,000 house of today is a far better value than the \$8,000 house of 1921 or the still more expensive house of 1929.

Important in the success of Gross-Morton over a period of years have been two other individuals not directly connected with the firm. These are Arthur Allen, the architect who has designed all the Gross-Morton houses, and Peter J. McKenna, advertising man who has

(Continued to page 150)



FRONT and side entrance, stairs and vestibule are cleverly grouped in bungalow plan. Bedrooms have quiet and privacy. Kitchen and bath plumbing are economical.



FIVE-ROOM bungalow with extra rooms upstairs.



POPULAR bungalow model with bay window.



SIDE entrance to kitchen in this new model Gross-Morton brick bungalow is close to the street. Brick exterior, slate roof and metal windows are some of the featured items.



THIS is Country Club Row in Levitt's Strathmore-Vanderbilt development. Every plot is expertly landscaped.

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Levitt's Luxury Details

WILLIAM and Alfred Levitt have done more to influence the course of home building on Long Island and in the rest of the nation than any other individuals that may be named. Since they started building houses in 1929—when they were 18 and 22 years old respectively—these brilliant young men have built and sold some 1,800 houses. Last year they built 225 houses.

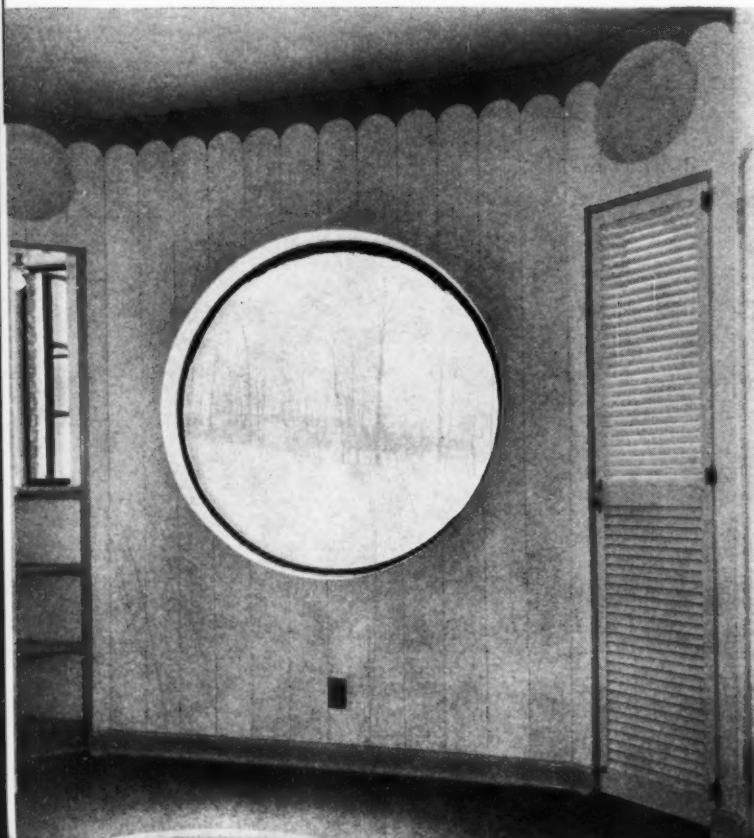
What accounts for this continued and truly remarkable success in home building? It is perhaps best summarized by saying that they give more quality house for the money, a finer environment and more *luxury details* than can customarily be found in such moderate priced homes.

In their latest development, Strathmore-Vanderbilt

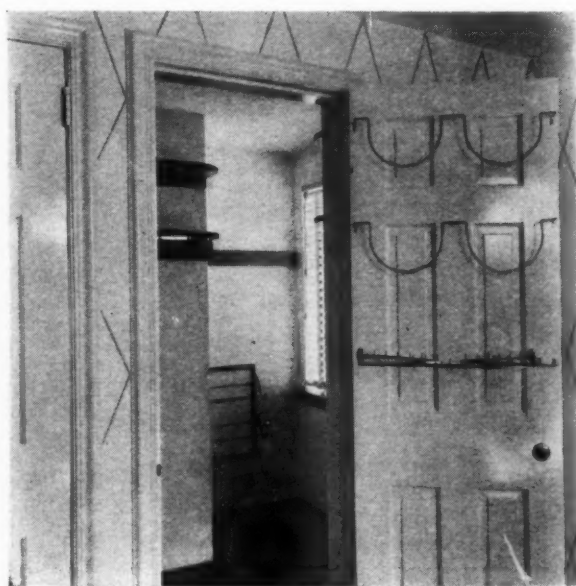
Country Club, they purchased the Long Island estate of the Vanderbilts, turned the mansion into a private club for residents of the community. The original beauty of the setting has been maintained and every house beautifully landscaped. Yet the price range has been kept principally in the \$9,500 to \$16,000 class, with only a small percentage ranging in the higher brackets.

Because Strathmore-Vanderbilt Country Club has been spectacularly successful—will be completely sold out early this year—*American Builder* presents herewith photographic studies of a typical street scene and the latest Levitt interiors. When photographed early in March, this new Levitt exhibit home had been just completed but had not yet been opened to the public.

LEVITT'S NAUTICAL NOOK



LEVITT'S CONVENIENT CLOSET



CLOTHES CLOSET fixtures such as these are installed in every Levitt closet. Shelves are nicely finished and painted in bright cheerful colors. **AT LEFT**—This cheerfully colored nautical breakfast nook adjoins the kitchen shown on opposite page. The decorative effect is achieved in plaster. Window is set in steel frame. Circular motif is carried out in colorful linoleum floor.



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In the four-color insert in another part of this issue, a striking Levitt house on Country Club Row is shown in vivid real-life colors. The Levitt interiors may be best described by saying that a flare for colorful, dramatic treatment permeates the house. There are large, strikingly located picture windows, decorative metal stair rails, unusual wall designs executed in plaster. Bits of bright and cheerful colors attract the eye in the kitchens, closets and hallways. Large plate glass mirrors are mounted in powder (Continued to page 136)

LEVITT'S SUPER-KITCHEN

Bright and cheerful Levitt kitchen is equipped with an abundance of cabinets and counter space. Ceiling is furred down over cabinets; small molding strips and trim are painted a bright red or blue. Glass block provides diffused light.

LEVITT'S LUXURY BATH

Extra large and luxurious for a \$14,000 home. Ladies' dressing table at left; shower stall at right. Closet fixture is enclosed in glass-doored compartment at rear opposite the shower stall.



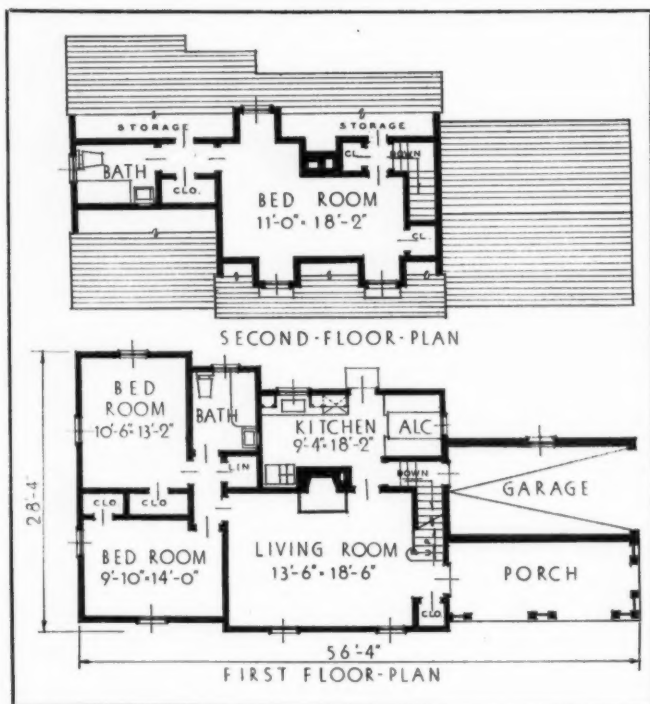
IN THIS latest Levitt bathroom center floor area (shown in foreground) is heavily carpeted. Tiled floor is raised 4" above carpet.



F. S. Lincoln, Photographer

Front Cover Long Island Home

Arthur E. Allen, Architect
George Melios, Builder



TWO bedrooms and bath downstairs in this front cover Long Island home. There is one large upstairs bedroom with bath, plus ample closet and storage space. Kitchen breakfast alcove is handy.

FOR its front cover home in this special Long Island issue, *American Builder* has selected the residence of George Kemp at Great Neck, L.I., designed by Arthur E. Allen, well known Long Island specialist in residential work, and built by George Melios, a substantial builder of Great Neck.

This house was one of a group selected by the Sherwin-Williams Decorative Studios for inclusion in their remarkable new 120-page "Paint and Color Style Guide." Shown in large and vivid detail, the colors recommended by the experts of the Decorative Studios are Gloss White walls, Willow Green shutters, Thatch Brown roof. An interesting feature of the exterior is the wide plain band of stucco below the cornice.

Floor plan provides a convenient garage entrance and an unusually attractive covered porch as part of garage wing. The kitchen is large enough to provide dining space. There are two good bedrooms and bath downstairs, well isolated, and an unusually large bedroom and bath upstairs with ample closet and storage space.

In describing this house to *American Builder*, the owner paid an unusually fine tribute to the builder, George Melios of Great Neck, saying that he was well satisfied with the job that was done, and then went on to say that Mr. Melios had not only done a good job in the first place but had stood by it afterwards and had taken care of every slightest defect that occurred—including such items as a dripping faucet several years later.

The house is substantially built, including a gas-fired Bryant heating system, Electrolux refrigerator, Stanley hardware, complete Johns-Manville rock wool insulation throughout and Sherwin-Williams paints.

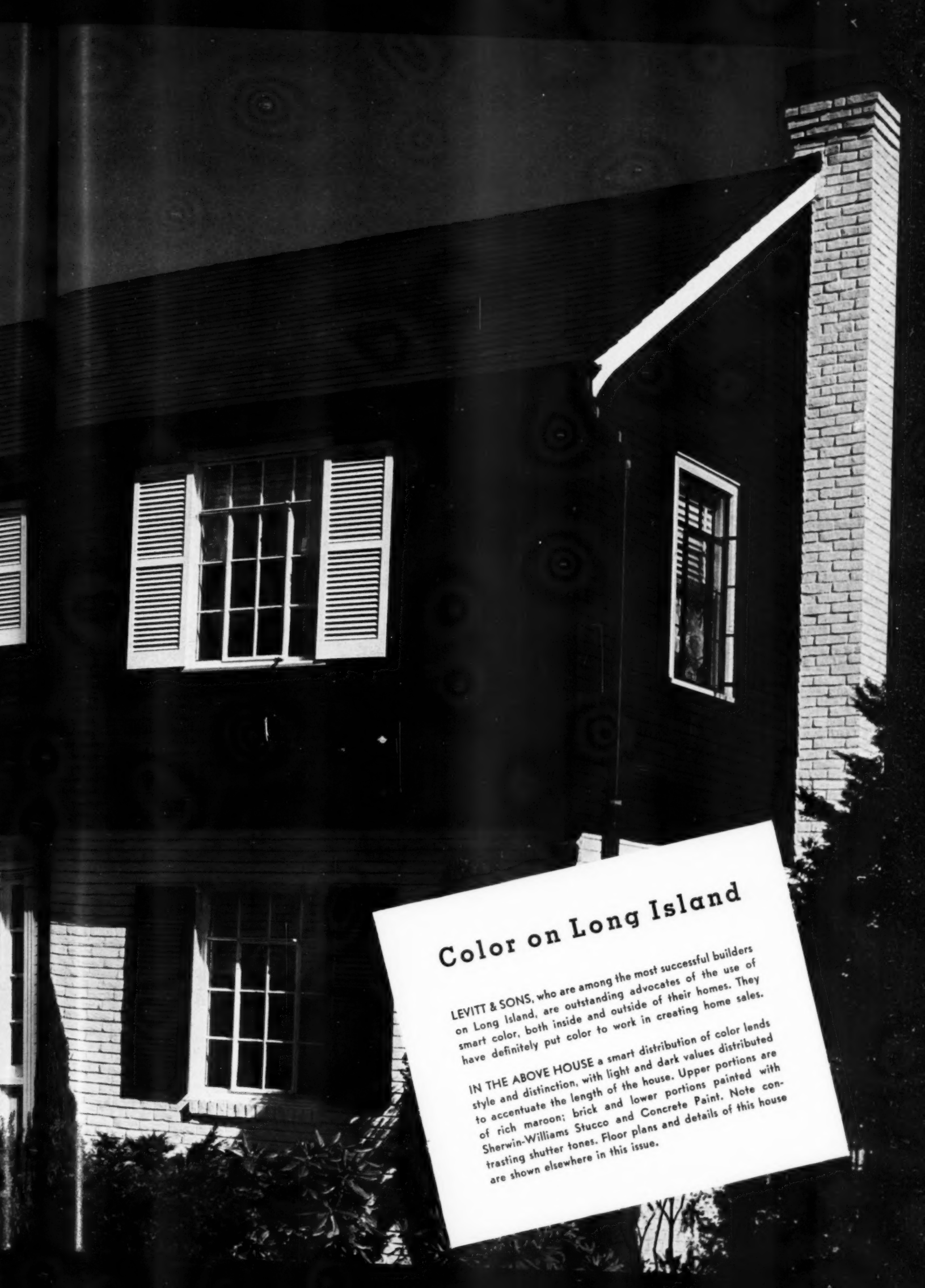


Paint and Color Style Guide to Home Sales

GLIMPSES OF A NEW WORLD of paint and color are revealed on this and the following pages—showing how builders are putting smart colors to work in selling homes. Here are sales-tested interiors and exteriors with their brilliant real-life colors shown through the medium of color photography. Arresting color combinations are shown that can put new life into drab houses.

THESE COLORFUL EXAMPLES dramatically show that color styling is one of the most inexpensive aids to home selling. These pages of color suggestions have been prepared by expert color stylists of the Sherwin-Williams Decorative Studios and are part of an impressive new 120 page portfolio, the "Paint and Color Style Guide" recently released to the building industry.





Color on Long Island

LEVITT & SONS, who are among the most successful builders on Long Island, are outstanding advocates of the use of smart color, both inside and outside of their homes. They have definitely put color to work in creating home sales.

IN THE ABOVE HOUSE a smart distribution of color lends style and distinction, with light and dark values distributed to accentuate the length of the house. Upper portions are of rich maroon; brick and lower portions painted with Sherwin-Williams Stucco and Concrete Paint. Note contrasting shutter tones. Floor plans and details of this house are shown elsewhere in this issue.

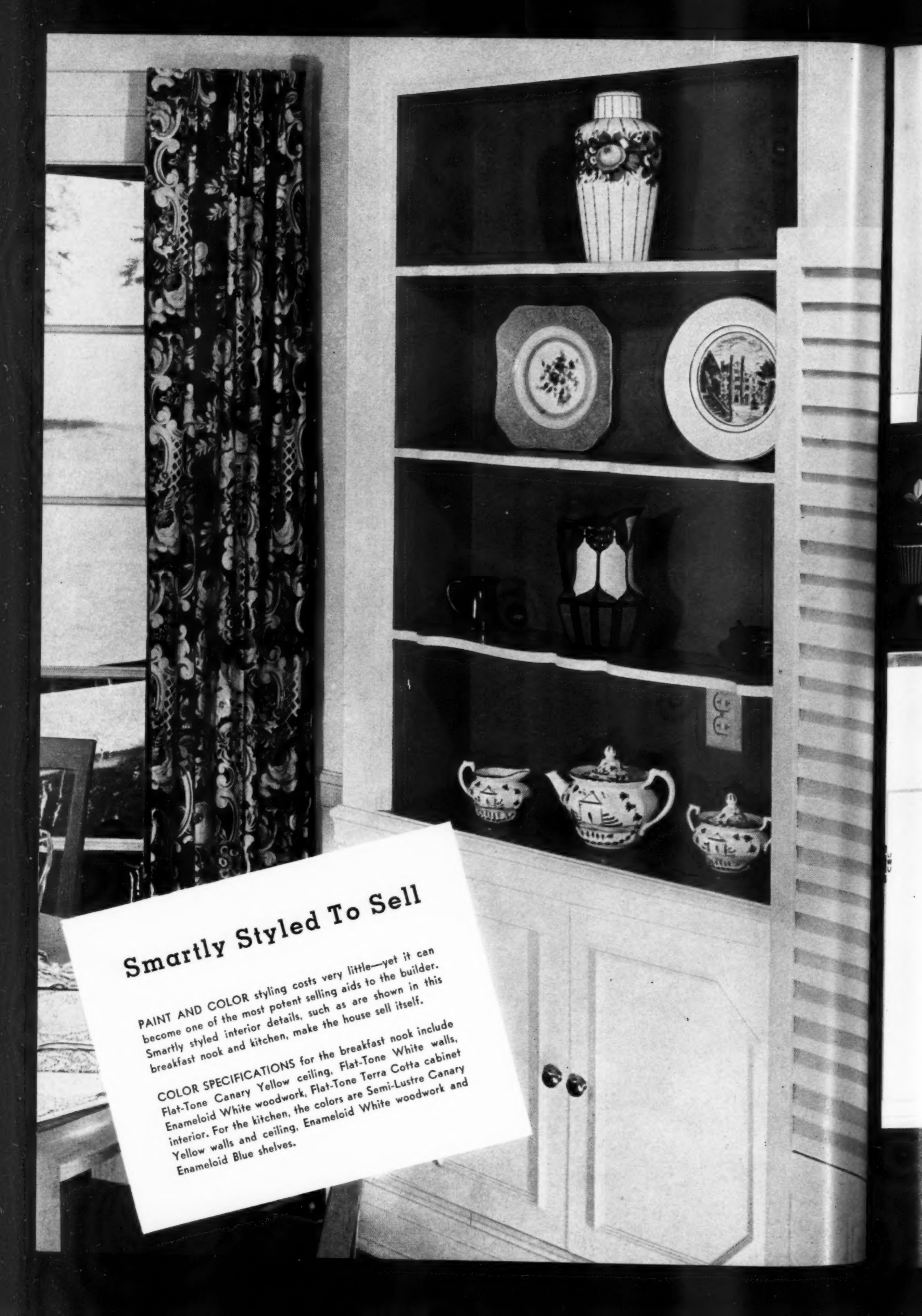




Showmanship in Color

RICH, deep-toned color used in large plain masses creates an impressive effect in this living room and focuses attention on the smartly styled white fireplace paneling. This is showmanship in color that creates interest and sales, yet remains within the bounds of good taste and livability.

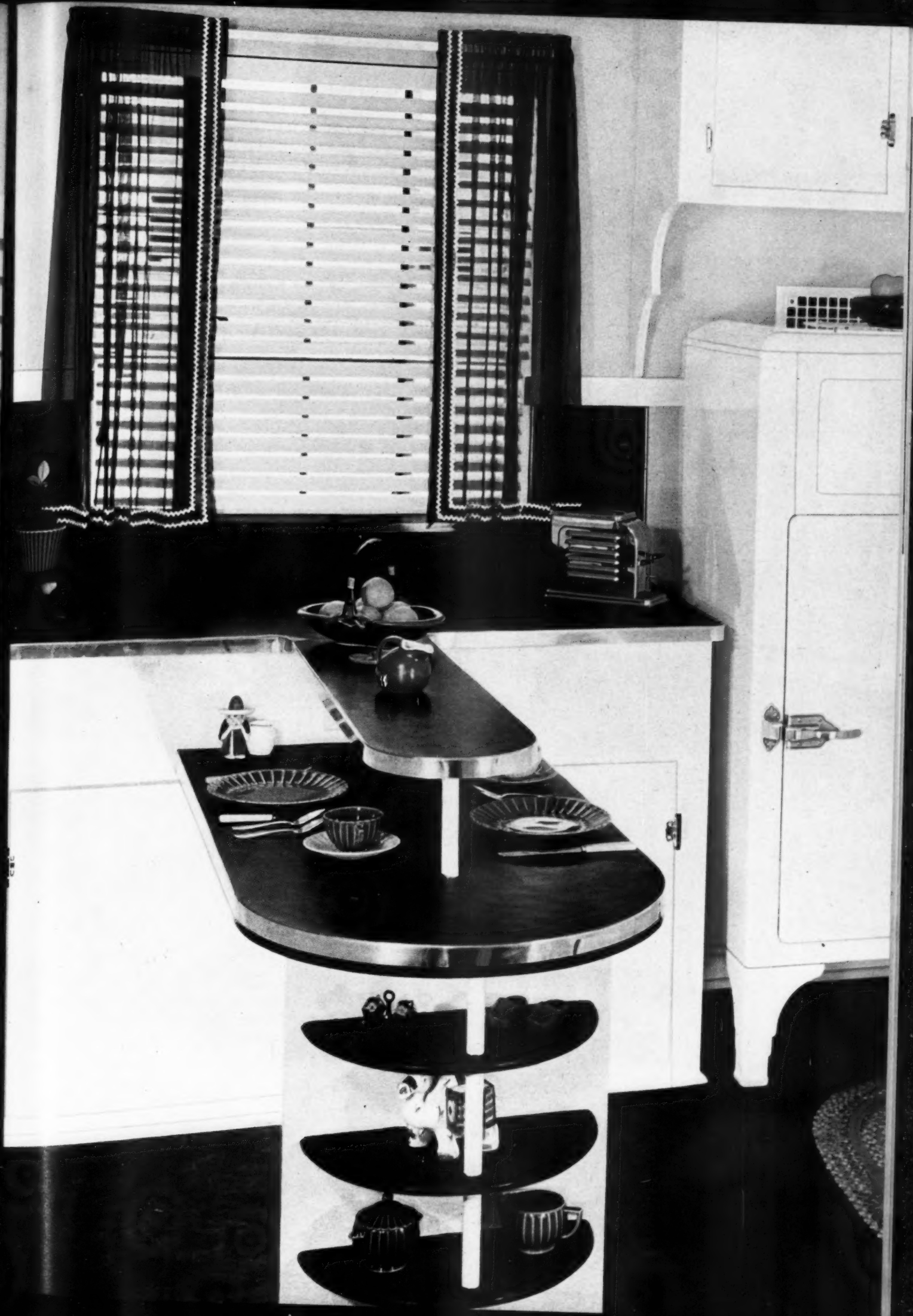
NEW HOMES and model homes, such as builders erect, are the "showrooms" of the building industry, and the selections of equipment, interior finish and color have a far-reaching influence on old home painting and modernizing. Walls above are painted with Flat-Tone Delft Blue; ceiling, Flat-Tone White; woodwork, Enameloid White.

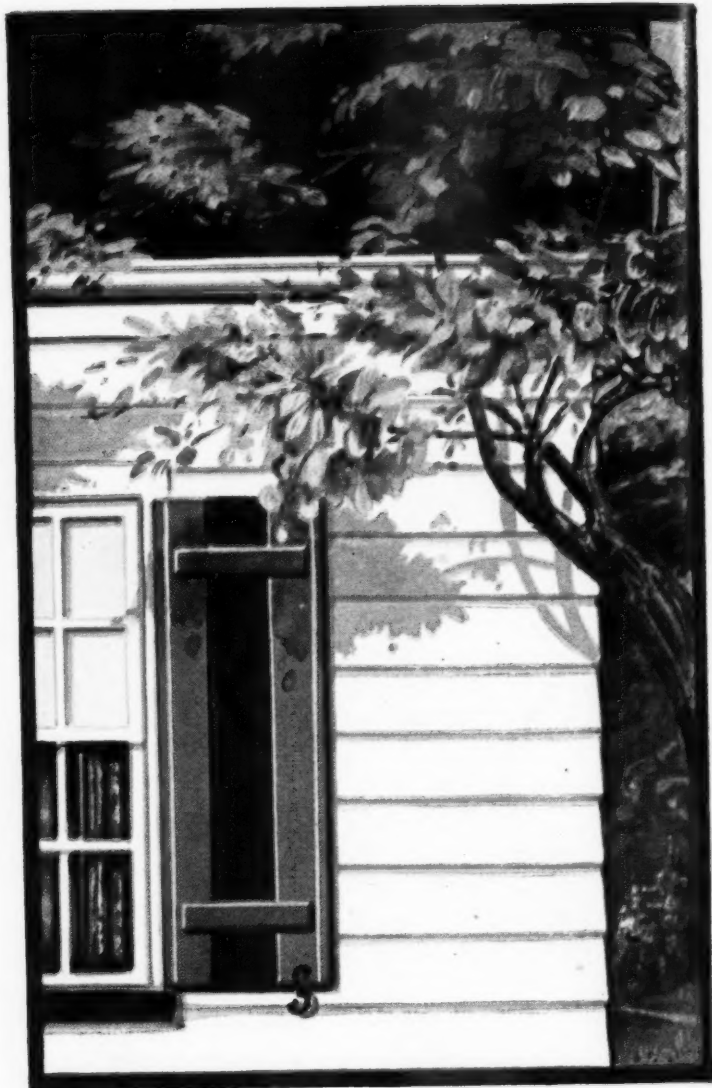


Smartly Styled To Sell

PAINT AND COLOR styling costs very little—yet it can become one of the most potent selling aids to the builder. Smartly styled interior details, such as are shown in this breakfast nook and kitchen, make the house sell itself.

COLOR SPECIFICATIONS for the breakfast nook include Flat-Tone Canary Yellow ceiling, Flat-Tone White walls, Enameloid White woodwork, Flat-Tone Terra Cotta cabinet interior. For the kitchen, the colors are Semi-Lustre Canary Yellow walls and ceiling, Enameloid White woodwork and Enameloid Blue shelves.





Harmonized Exteriors

THE TONE or atmosphere of a house or of a whole building project can be made bright, modern and up-to-date by color-styling. Here are 3 harmonized exteriors suggested for builders by the Sherwin-Williams Decorative Service. Colors for the roof, walls, trim and shutters have been specially planned to harmonize correctly and give the exteriors a smart, salable appearance.

COLOR SPECIFICATIONS—Upper left: walls, Cream Gray; shutters, Cardinal Red; trim, Green; roof, Thatch-Brown Shingle Stain. UPPER RIGHT: walls and trim, White; shutters, Slate and Castilian Blue; roof, Castilian Blue 4 parts, black 1 part. LOWER LEFT: walls, Gloss White; shutters, Fiesta Yellow; trim, Gloss White; roof, Thatch-Brown Shingle Stain.

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STREET scene at Surrey Estates, Schuettinger & Oehler's attractive development at Jamaica, L. I.

250 Largest Long Island Developments

THIS list and the map on pages 84 and 85 represent the most complete directory of prominent Long Island operative building developments ever published.

Prepared with the invaluable assistance of the staff of Thomas G. Grace, state director, and Stanley R. White, regional director of the FHA, location of every FHA-approved development in which 25 or more houses have been built is shown. In some cases the same operative builder has several developments and these are given separately. In a few cases completed projects are included. Some 20,000 houses have been built in these 250 developments.

Because the principal volume of building is concentrated in three counties, Kings (Brooklyn), Queens and Nassau, these three only are shown in detail. In the accompanying list the map number shows location in each county. To illustrate, No. 2 on the map in Kings County shows Trump Homes located in the Flatbush section of Brooklyn. No. 2 in Queens County shows Artcraft Homes located in Astoria. No. 2 in Nassau County shows Montfort Hills at Port Washington. In some localities where several developments lie close together a single number is used to designate the group.

Total number of homes indicated in the column at far right of list gives, as nearly as can be estimated, the total number of homes built in that particular development to date. Wherever possible, the name of the principal official of a firm is shown in parentheses following the development name.

BROOKLYN, KINGS COUNTY

Map No.	Development	Price Range	No. of Homes Built	
			1939	Total
1.	Louis Bright, Bushwick Section.....	\$4,000-\$ 8,500	85	85
2.	Trump Homes (F. C. Trump), Flatbush.....	6,750- 7,900	250	700
3.	H. Leichtung, Flatbush.....	4,000- 12,000	70	140
4.	Leon Paschow, Flatbush.....	6,000- 7,500	50	60
5.	New Deal Homes (F. Filloroma) Flatbush.....	6,750- 8,000	100	150
6.	Paul Rinella, Flatbush.....		40	60
7.	Nathan Halperin, Flatbush.....		100	180
8.	Hollywood Homes (David Minkin) Flatbush.....	5,250		88
9.	Economy Homes (Philip Levine) Flatbush.....	5,990- 9,000	40	200
10.	Anthony Ferrante Bldg. Corp., Flatbush.....	5,690- 7,000	151	175
11.	James Madison Homes (Spindel) Flatbush.....	6,000- 7,990	50	100
12.	Progress Homes (Baum) Bedford Section.....	6,000- 7,950	25	55

13.	Madison Homes (Dormant & Roche), Flatbush.....	6,000-	7,950	100	200
14.	Dormant & Goetz.....				200
15.	Joy Homes (Silverman), Bedford Section.....	6,990-	7,690	60	110
16.	Vicose Realty, Inc. (Doc Levine), Bedford.....	6,000-	8,250	100	105
17.	Schiffman Homes (H. Schiffman), Bedford.....	6,990-	8,950	100	230
18.	Match Brothers (Sam & Jack Match), Bedford.....	6,000-	7,990	200	400
19.	Cameo Homes (Kaplan, Baum & Brown), Bedford.....	6,990-	8,500	200	230
20.	Waxman Bros. (Harry Waxman), Brighton.....	6,000-	8,990	150	200
21.	Anthony Sabella, Borough Park.....	6,750-	8,550	75	80
22.	Twin Oaks Estates (A. Cinque), Borough Pk.....	6,000-	8,950	200	200
23.	State Constr. Co. (Futterman), Borough Pk.....	6,000-	7,990	65	100
24.	Chateau Homes (A. Cinque), Flatbush.....	4,000-	7,990	150	160
25.	Devonshire Homes (Silverstein), Bedford.....	6,000-	7,990	100	100
26.	Calder Homes (Senator Calder), Flatbush.....	6,990-	8,990	100	100

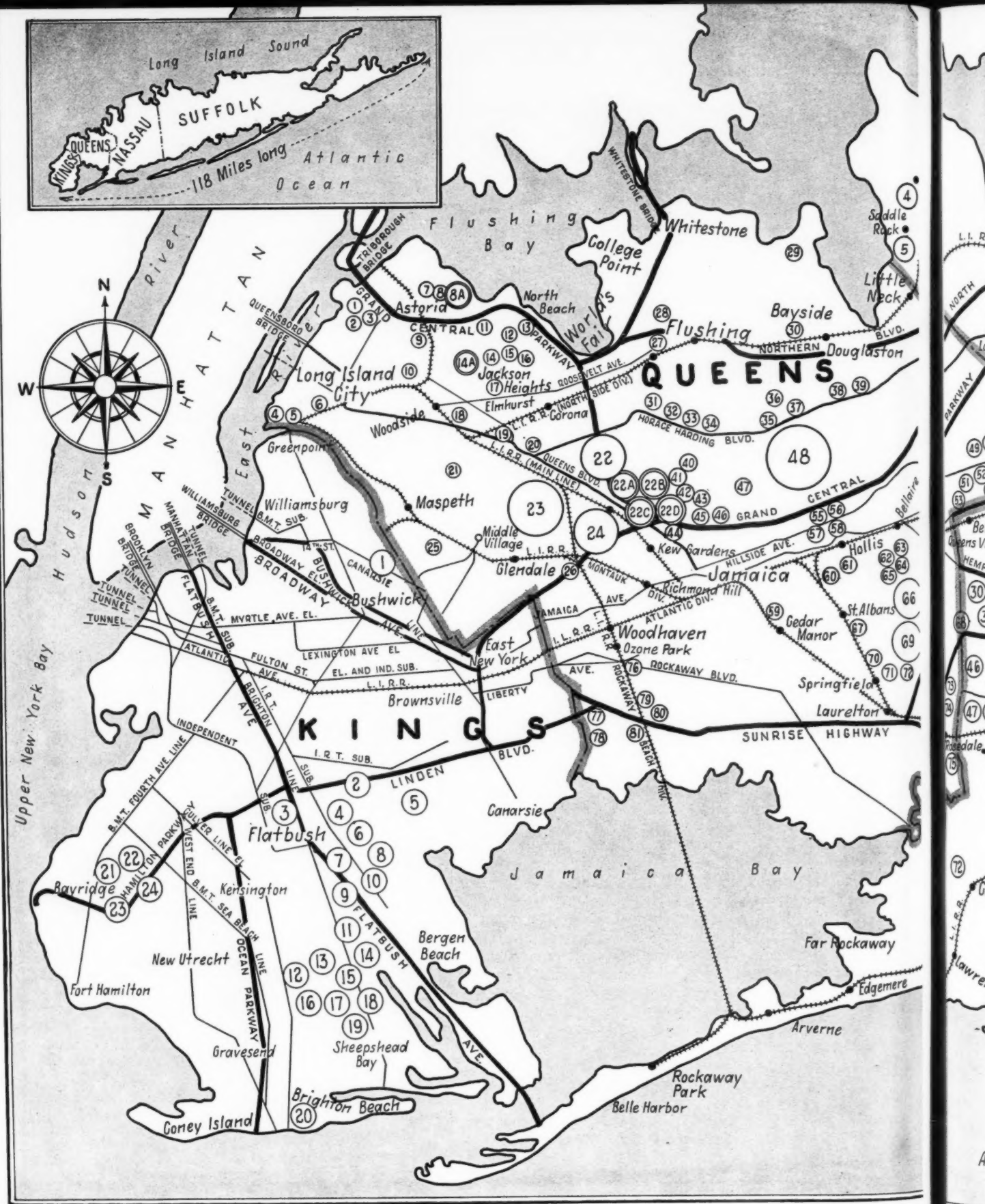
QUEENS COUNTY

1.	Chesterfield (Wm. Krause), Astoria.....	\$4,500-\$ 8,500		30
2.	Artcraft (Nat Ringler), Astoria.....	5,500- 7,000	20	25
2.	Kissena Pk. Homes (H. Silman), Astoria.....			35
3.	Dotwill (Wm. Solomon), Astoria.....	5,500- 7,000	15	50
4.	Lido Homes (Abel), Long Island City.....	6,000- 7,500	20	40
5.	Super Homes (David Meltzer), L. I. City.....	6,000- 7,500	20	40
6.	Valor Homes (David Meltzer), L. I. City.....	6,000- 7,500	15	50
7.	Lido Homes (David Meltzer), Lido Beach.....	6,000- 7,000		25
8.	Excello (Gladston & Etkin).....	5,500- 7,500		40
8A.	Rental Housing:			
	First Garden Bay.....			279 apts.
	Second Garden Bay.....			210 apts.
	Third Garden Bay.....			270 apts.
9.	Boulevard Garden Homes (B. & H. Constr. Co.), Woodside.....	5,700- 6,500	20	50
10.	Artcraft (Jack Lipshutz), Woodside.....	5,500- 7,000	40	40
11.	Airport Homes (Graff), E. Elmhurst.....	5,500- 6,500	20	40
12.	Dependable Homes, Jackson Heights.....	5,500- 7,000	40	100

(Continued to next page)

Who's Who on Long Island

APPROXIMATELY 20,000 houses have been built in the 250 largest Long Island developments given in this list. In addition to the name of the builder, the price range and the number of houses built last year, the total number of homes built to date in each development is shown. To locate the development, turn to "Ye Builders' Mappe of Long Island," next page.

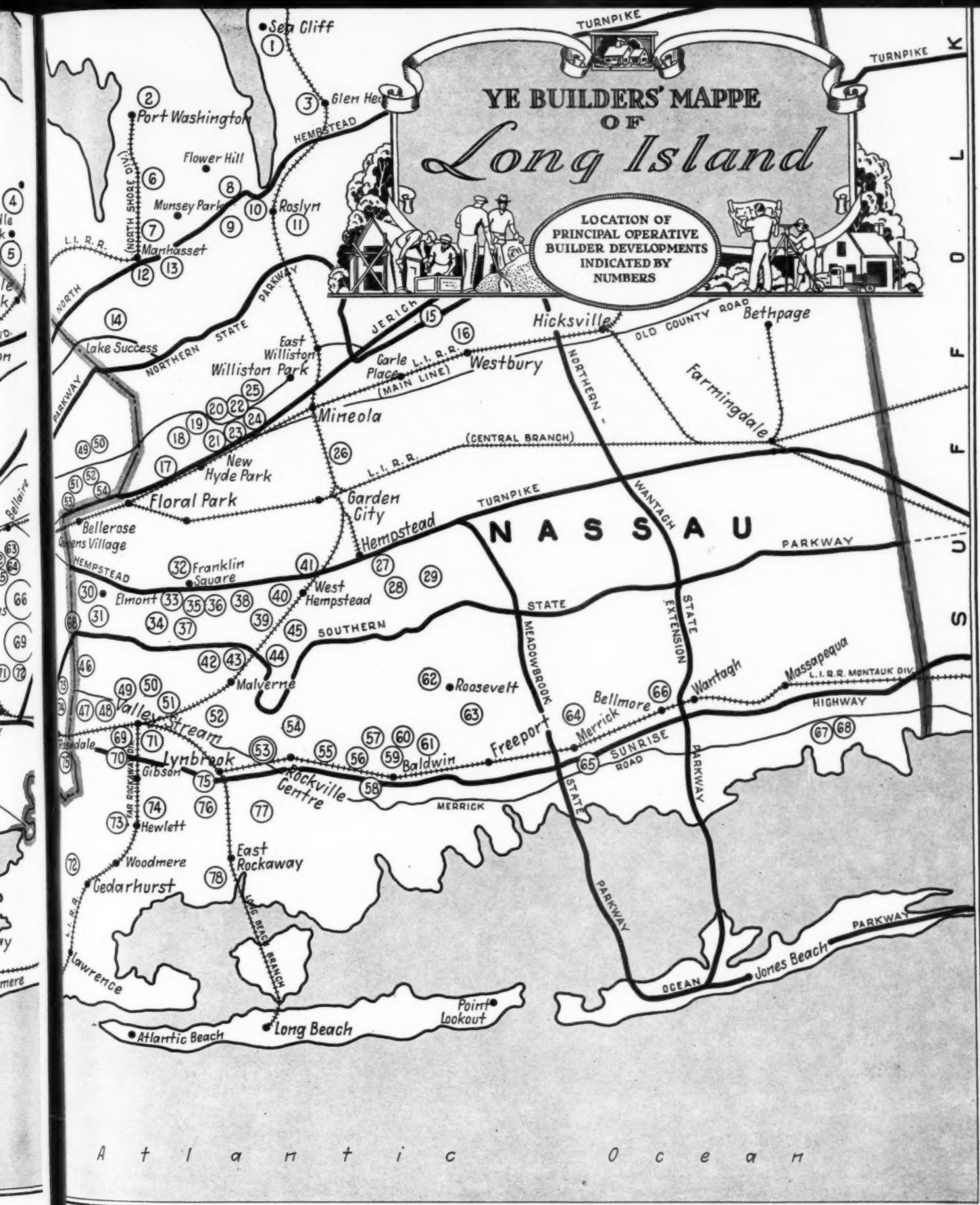


250 Largest Long Island Developments

(Continued from preceding page)

Map No.	Development	Price Range	No. of Homes Built 1939	Total
13.	Guterman Bros., Jackson Heights	6,000- 7,500	60	150
14.	Guterman Bros. (Jules Guterman), Jackson Heights	6,000- 6,500	75	
14A.	Rental Housing:			

Queensboro Garden Housing			354	apts.
15. Jess Homes (Jesse Seligman), Corona	6,000- 7,500	15	25	
16. Jaxland (Joe Fulton), Flushing	5,000- 6,500	15	35	
17. Willow Manor, Jackson Heights	6,000- 8,000	50	75	
18. Winhill (Mitchell Ittelson), Woodside	5,000- 6,000	40	50	
19. Matthews (G. X. Matthews), Elmhurst	5,000- 5,500	20	35	
20. Elmwood Homes (Human & Rosenberg), Elmhurst	5,000- 6,000	50	50	
21. Hyatt Realities (Frank Principe), Ridgewood Plateau	5,500- 7,500	20	50	



22. Park Central (Sam Evans), Forest Hills.....	40
22. Insured Homes (B. M. Hess), Forest Hills.....	25
22. Park Acres (D. W. Beck), Forest Hills.....	50
22. Forest Hills Plateau, (L. Bright).....	50
22. Sindar (Sol Atlas).....	50
22. Sussex Homes (Paul Jeffrey), Forest Hills.....	100
22. Wetherole, Rego Park.....	15
22A. Rental Housing:	
Queens Blvd. Apts.....	540 apts.
22B. Rental Housing:	

Thornwood Estates.....	312 apts.
22C. Rental Housing:	
Georgian Village.....	422 apts.
22D. Rental Housing:	
Regency Park Apts.....	540 apts.
23. Havenwood (Jacob Brody), Elmhurst.....	5,000- 6,000 70 100
23. W. & S. (Willy & Sjursen).....	40
23. Tru Homes (Human), Elmhurst.....	5,000- 6,000 50 100

(Continued to page 152)

Large Homesites Attract

Norgate-at-Roslyn Offers One-Third- to One-Half-Acre Plots

THE day of the cramped, crowded homesite is passing. Proof of this statement lies in the fact that many of Long Island's smartest builders are rapidly switching to new land areas where their houses can spread out in attractive wooded surroundings.

A good illustration is Norgate-at-Roslyn, operated by G. A. Mezger.

Gustave Mezger, in addition to being a builder of 17 years experience and sound reputation on Long Island, is a graduate engineer from the University of Syracuse.

About a year ago he successfully completed a 60-house operation at Norgate-at-Manhasset and started his present operation at Roslyn. This new development has aroused much interest, not only on the part of the public but in building circles, because of its definite move toward the rambling type of Colonial home built on large wooded plots.

Plots in this property range in size from one-quarter, one-third, one-half acre, up to as high as three-

quarters of an acre. Most of the property is heavily wooded. During the past year 30 houses were sold and Mezger's plans for 1940 call for between 75 and 100 houses, in price range from \$8,450 to \$18,000.

The Mezger-built houses are replete with charming Colonial touches, such as carriage lamps, picket fences, low shed entrances, weather vanes and shutters.

Included in the Mezger specifications of materials and equipment are:

HEATING—Fitzgibbons steel tube boilers, 2-pipe Bell & Gossett forced circulation hot water system.

WIRING—G-E wiring and switches throughout. Levolite fixtures.

INSULATION—4" Johns-Manville Rockwool insulation, walls and ceilings.

ROOF—Genuine certified Bangor slate laid over 30-lb. J-M asphalt saturated felt.

KITCHEN EQUIPMENT—Boro Wood Products kitchen cabinets, Tappan gas range, G-E 6 cu. ft. refrigerator.

WINDOWS—Hope's steel casement windows.

COPPER TUBING—Anaconda hard copper tubing.

BATHROOM EQUIPMENT—Standard Sanitary fixtures.

PAINT—A. C. Horn paint.

SHINGLES—24" No. 1 Royal red cedar shingles.

LATEST Long Island trend is illustrated by two of G. A. Mezger's low rambling Colonials, designed by Architect Philip Resnyk, shown at left. The Norgate-at-Roslyn houses have such charming old Colonial details as shed entrances lighted by carriage lamps; low white picket fences; pleasant little back porches; brick, clap-board and shingle construction.

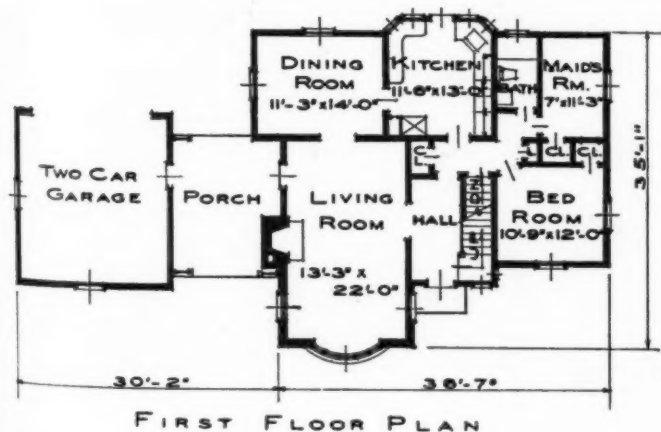


Low Rambling Colonials on Large Wooded Plots Sell Best, Says G. A. Mezger, Long Island Builder with 17 Years Experience



COLONIAL Charm with a capital "C". The inviting entrance is enclosed by a picket fence, and the large plot permits the builder to spread the house out, with its most impressive face to the street.

FLOOR plan features comfortable downstairs bedrooms. Extra bedrooms upstairs may be left unfinished at time of construction and added later when owner's needs require them. Philip Resnyk, architect.



Betsy Ross GIRLS Help Sell HOMES

**How Colonial Charm Intrigues
Buyers at New Salem; 100
Homes Sold in Less Than Year**

WHEN expectant home buyers visited Williams-Harter's Colonial model homes at the recent 1940 opening of New Salem at Port Washington, Long Island, they were met at the doors by as attractive a bevy of beauties as ever graced a Broadway show.

Not only beautiful, but well trained—for Messrs. Williams and Harter executed a scoop in showmanship by hiring eight girls who had served as hostesses in the Homes of Tomorrow at the New York World's Fair last summer.

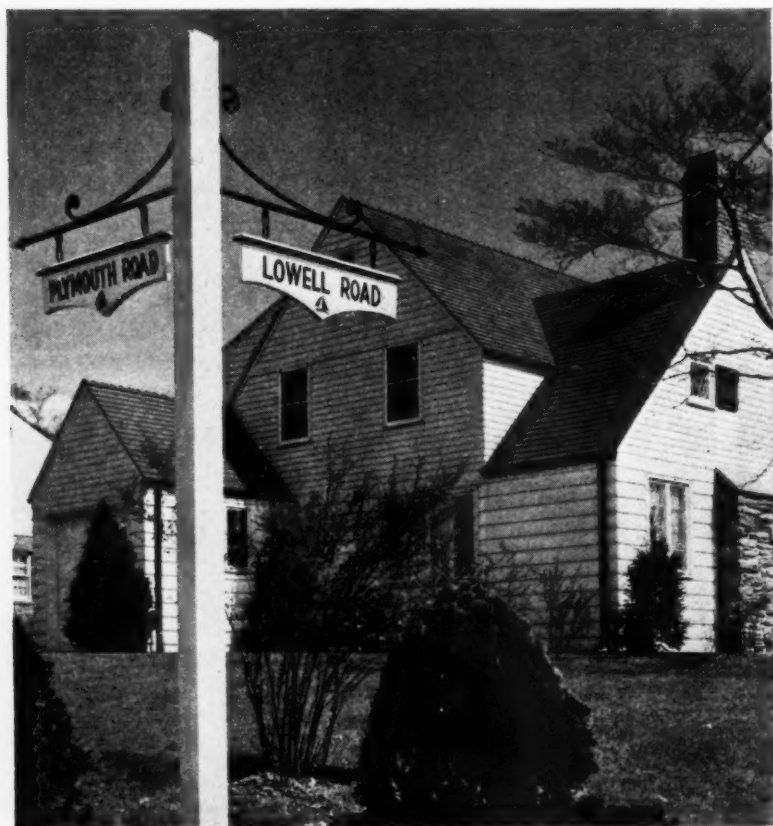
The girls were dressed in appropriate Colonial costumes in keeping with the Early American spirit of New Salem. They did not engage in actual selling, but escorted visitors

through the houses answering all their questions and pointing out the attractive features of the houses. Each girl presided over a model home designed in the spirit of some famous Colonial house. The eight model homes were named after the following:

Pidge Tavern, Pawtucket, R.I., built in 1640 and used by Lafayette as headquarters; Balch House, Beverly, Mass., built in 1638 and famous for its Early Colonial architecture; Hamilton House, Salem, Mass., another famous Early American home from rural New England;



NEW SALEM hostesses
at the wishing well.



STREET scenes, such as the one at corner of Plymouth Road and Lowell Road, at left, carry out New Salem's Colonial air. **ABOVE** is shown a pine paneled fire-place detail in restrained Colonial style.



VIEW of New Salem development at Port Washington, Long Island, looking down street of attractive Colonial homes.

Winston House; Miller Cottage, Concord, Mass., built about 1775; Putnam Homestead, Greenwich, Conn., a famous Connecticut home drawing on the shipbuilding traditions of the coastal towns; The Buckingham, Marlboro, Mass.; The Tyler House, Windsor, Conn.

Each house was described by a small folder giving the historical background but also pointing out the modern features of the present-day version.

Thus Cy Williams and Walter J. Harter, young college-trained developers of one of Long Island North Shore's latest and most successful communities, carried on the Early American tradition they had established.

The Colonial theme and atmosphere are carried out throughout the development with split rail fences, carriage lamps, specially designed Colonial street markers and, of course, authentic Colonial architecture in the houses themselves.

Perhaps the original start on this Colonial technique was made when Williams and Harter visited the Colonial village at the Philadelphia Sesquicentennial Exposition some years ago.

When they acquired the large tract of land bordering Port Washington Boulevard less than two years ago, the

first move they made was to purchase a large quantity of genuine old post and rail fences from an old farm, which they transplanted and whitewashed. They took several long motor tours through New England photographing outstanding Colonial houses. Right from the start they designed and built authentic copies of Massachusetts salt-box designs, Cape Cod fishermen's cottages and stately Back Bay Federalist homes. Every sign, every street name, and even the real estate office itself carried out the Colonial motif. Some of the street names include, for example, Plymouth Road, Lowell Road, Colonial Road, Deerfield Road, Alden Road, Salem Lane, Colby Road.

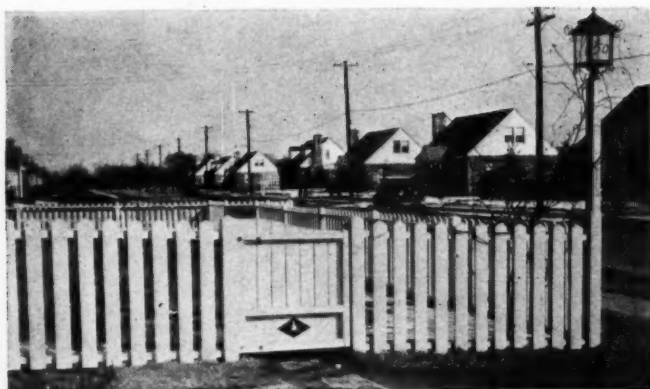
Public response to this technique exceeded all expectations. The first section of more than 50 houses was quickly sold out, and options were taken on additional land, with the result that approximately 100 dwellings

(Continued to page 138)



HOSTESS greets visitors in the "Winston House" above. AT RIGHT, such fine touches as the old carriage lamp, a wishing well and attractively styled Colonial weathervane on the garage carry out the New Salem theme.





PICKET fence, gate and lamp add to Colonial character.

100 Cottages Sold on 100 by 100 Foot Plots

After 25 Years Experience, Rorech of Hempstead, L. I., Says These Colonial Cottage Homes Prove "Best Value" Sellers

CHARLES J. Rorech of Hempstead, Long Island, is the son of a builder and started in the business as a carpenter some 25 years ago. He has built many hundreds of homes in West Hempstead, Jamaica Estates, and Great Neck, ranging from \$4,000 to \$35,000 in cost. The Rorech business now being conducted in three different developments is a "family affair," with Charles' four brothers and a sister all taking part.

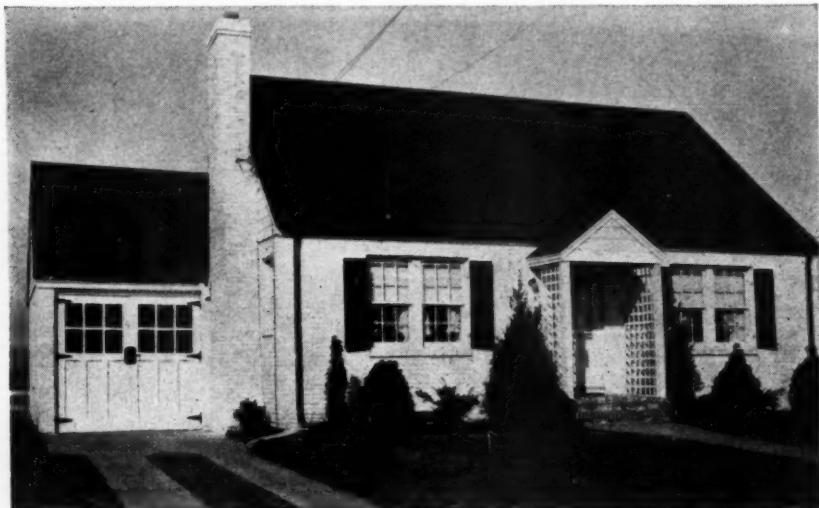
Of all the Rorech projects, the most outstanding recent success is the East Hempstead Homesteads project, in which small Cape Cod cottages on 100 by 100-foot plots have been very well received by the public.

Rorech was one of the first to buy up large enough parcels of land to be able to give such good sized home-

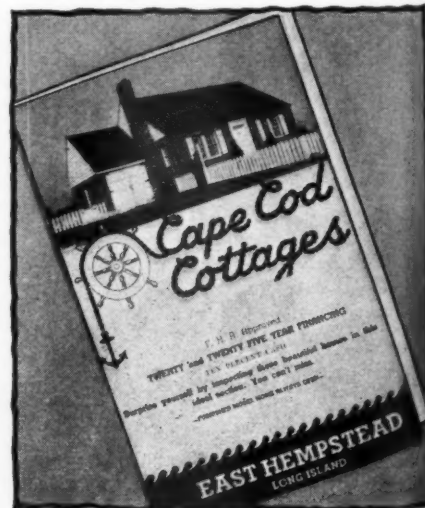
sites. Being out of the congested part of Long Island, taxes are low, with the result that the houses—most of which are in the slightly under \$5,000 class—can be carried by the home owner for about \$36 a month, including interest, amortization and taxes.

All of the Rorech-built houses are insulated, being built with insulating sheathing. In his three developments including Goodrich Homes at West Hempstead and Williston Homes, Williston Park, Rorech has built some 210 houses in the past three years. He expects to build 100 or more this year.

Specifications and construction details of East Hempstead Homesteads houses include the following: 2 x 10 floor beams; 12" poured concrete foundations; Insulite



WHITE brick Colonial with latticed entrance, deep-toned shutters.



RORECH'S 5" x 8" sales folder.

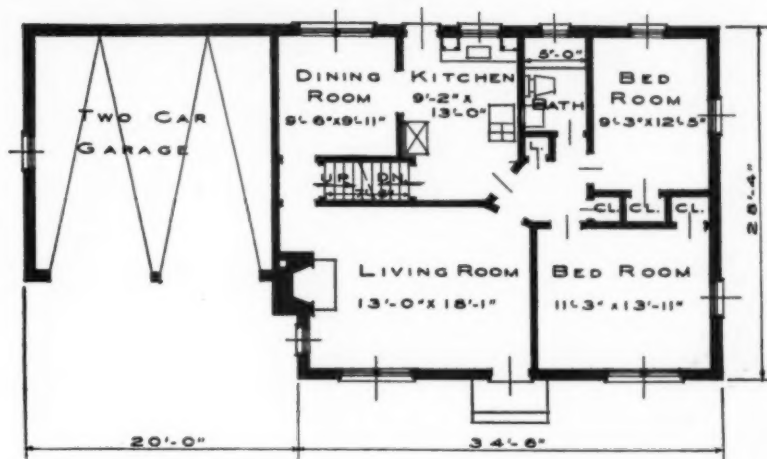


**How a Family
of Long Island
Builders Works
Together to
Give More
Quality House
for the Money**

BASIC plan of Rorech's East Hempstead houses is 34' 6" x 28' 4", providing a very livable small home. Stone front design, above, with attached 2-car garage has proved popular.

Bildrite sheathing; National boilers and A. B. C. oil burners; Caloric gas ranges; braced frame construction; copper radiators, gutters, flashing and water pipes; double oak floors; log burning fireplaces; weatherstripped windows; guaranteed slate and heavy asphalt roofs.

Colored tile bath and showers are included in these houses; hot water control is with Sav-U-Time remote water heater control, Sav-U-Time Sales Co., Rochester, N.Y. These are some of the better value highlights.



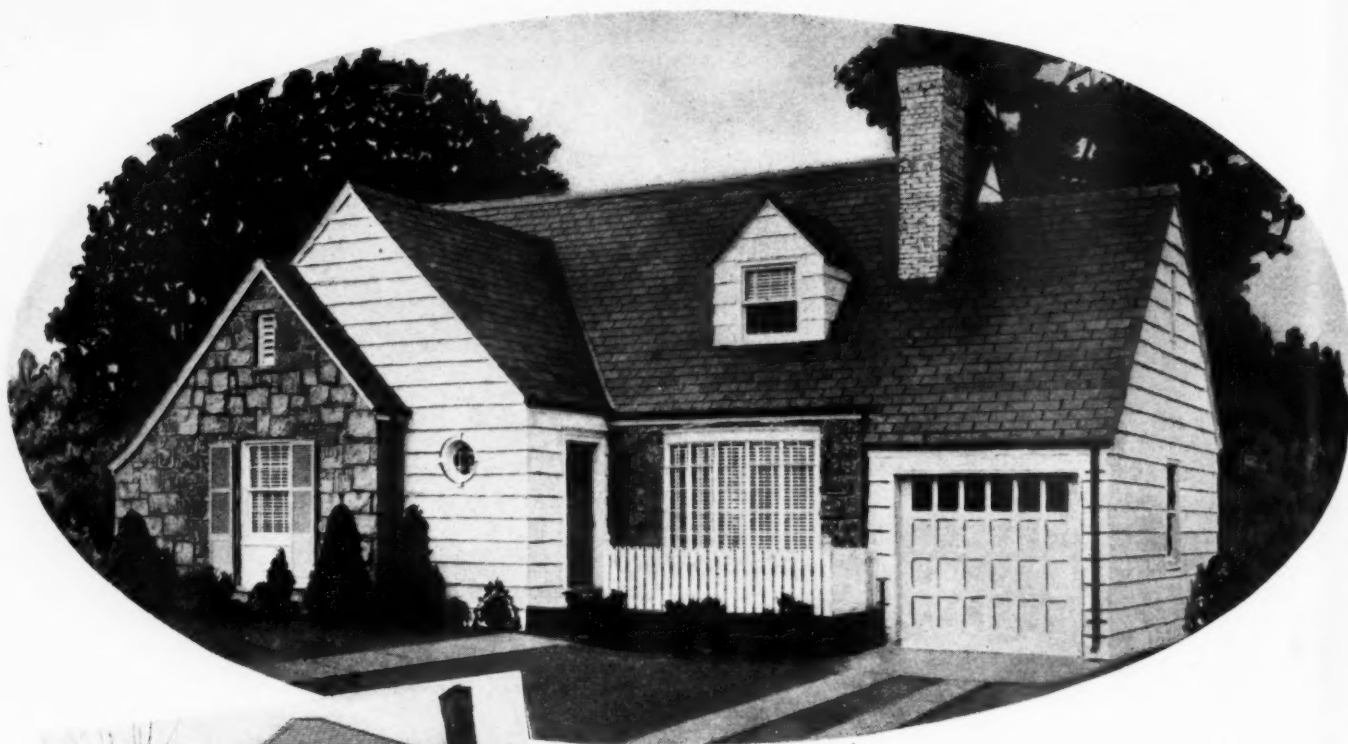
FIRST FLOOR PLAN



INSULATING sheathing is used.



RED brick model with dormers. Extra rooms on second floor.

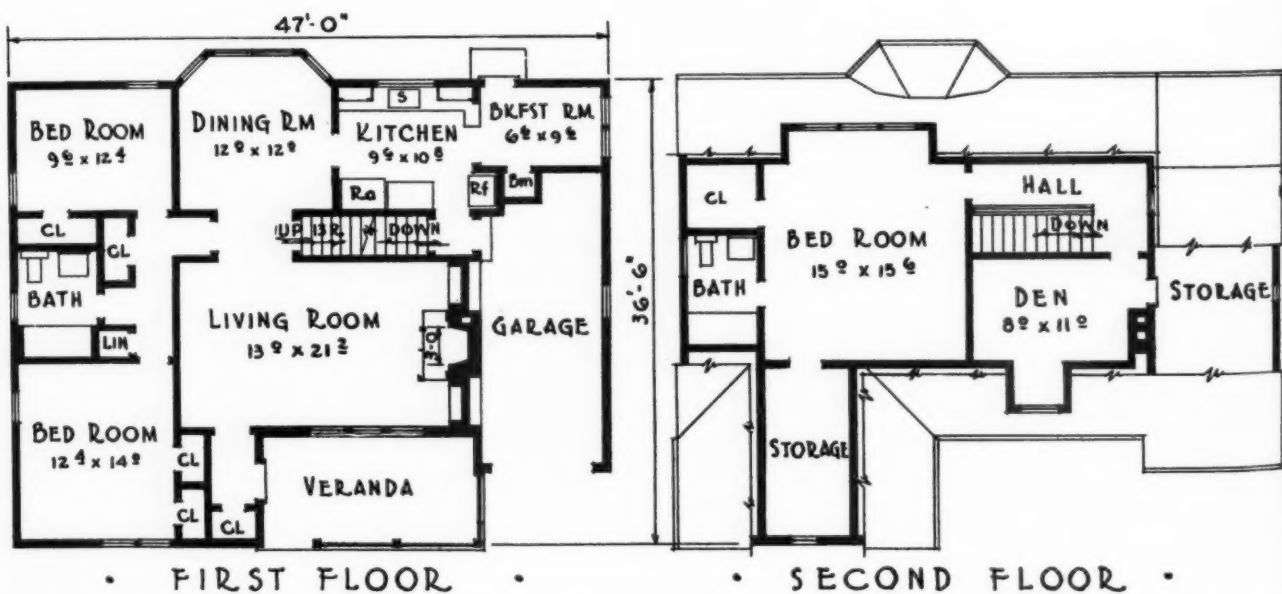


CHESTER HILL HOMES

"Priceless Extras" **Influence Home Buyers**

OTTO J. HARTWIG, who handles the advertising for Chester Hill and a number of other Long Island developments, has frequently said that there are certain "priceless extras" that influence home buyers. The first of these he believes is *neighborhood character*. People who buy homes usually have children and their desire is to get away from crowded or unattractive quarters to more countrylike, beautiful surroundings.

Chester Hill at Manhasset, L. I., operated by F. G. Lyons and W. Busch, undoubtedly has "priceless extras" as to the neighborhood. It lies in the heart of the North Shore's finest residential section, with a private park, lagoon and fine stand of trees



PLAN of latest model Chester home (in oval above) shows recent change to Colonial cottage style with downstairs bedrooms.



OVAL COUNTER or bar separates this colorful Chester Hill kitchen from the dining area. Modern wallpaper, bright linoleum colors, well spaced windows and Venetian blinds help achieve this fine effect.

Photo by
W. W.
Thomas

right on the property. The roadways are attractive, winding and practical, 24 feet wide, of reinforced concrete, with sidewalks running along the curb, so that it is possible to step from a car at any point.

Chester Hill's "priceless extras" extend also to the houses themselves which are beautifully designed and well landscaped. W. Busch, in charge of the building operations is a skilled architect as well as builder. He has carried many fine details of construction and workmanship throughout the interiors of the houses. The kitchens in particular, as shown herewith, are colorful, attractive and livable.

Construction details and equipment include: General Electric oil burning winter air conditioning; U. S. Gypsum mineral wool insulation, 2" in sidewalls, 4" in second floor ceilings; Bangor slate roof laid over 24-lb. felt; Detroit Steel Products Fenestra steel casement windows; select oak floors; complete weatherstripping; copper and red brass water piping; bronze screen; Overhead garage doors.



ANOTHER Chester Hill kitchen which shows some of the "priceless extras" that help sell Long Island homes. The comfortable breakfast nook is backed by a circular glass block bay. Cabinets are trim but colorful. Accents of bright colors in the ceiling molding, trim and Venetian blinds add a lively decorative touch.



DECORATIVE plywood in living room. Dentil is made from 1" x 4" crown mould and 1 3/4" x 2 1/4" blocks individually nailed.

\$25-a-Month House Has 27 by 28 Foot Basic Plan

How McGowan of Central
Islip Gets the Costs Down

MOST people outside of New York think of Long Island as being almost solidly built up. They do not realize that the Island is 118 miles long and that Suffolk County, which composes its principal area, is a rural, sparsely built-up section.

Out in the "wide open spaces" of Long Island in the village of Central Islip, there is a builder who is attempting to bring the economies of standardization to very low cost rural building. Harold McGowan is an energetic young contractor who got into the building business at the age of 18, and who has built more than 100 houses in the past three years, most of them from \$3,000 to \$4,000.

His aim is to produce houses within reach of the man who can afford a rental of \$25 to \$30 a month. This spring he has embarked on a new program which has much promise. A four-room model home illustrated here with a basic floor plan 27 by 28 feet has been built. McGowan advertised that he would build the identical house anywhere in the vicinity for \$2,990—no cash payment required if the owner's lot was clear and free. (See sample advertisement that is shown at the end of this article.)

Obviously it is hard to design a house that will suit everyone, so as the hundreds of prospects have gone through the model house and made comments McGowan has developed a number of standard variations. Thus, if a prospect says the living room is too small he can quote him a price immediately on a very similar house with a slightly larger living room. Or if he would prefer to have a full dining room and one bedroom rather than two bedrooms, McGowan can quote an immediate price on such a plan.

The success of this approach has been very good. Within a month after the



HAROLD MCGOWAN, with sign, at his Central Islip, L. I. headquarters.

OFFICE and workshop, where McGowan builds plywood kitchen cabinets, door hoods, corner cupboards, brackets and other millwork details for his low-priced houses. Several small apartments in upper part of building help pay its upkeep costs.



MODEL house, with basic plan illustrated below, is priced within reach of the \$25 to \$30 a week income buyer. McGowan will build it anywhere within a radius of 10 miles and quotes definite prices on the variation shown.

McGOWAN'S shop-built kitchens shown below are unusually complete for a low-cost house. They are built in standardized plywood units in his own workshop, as shown opposite.

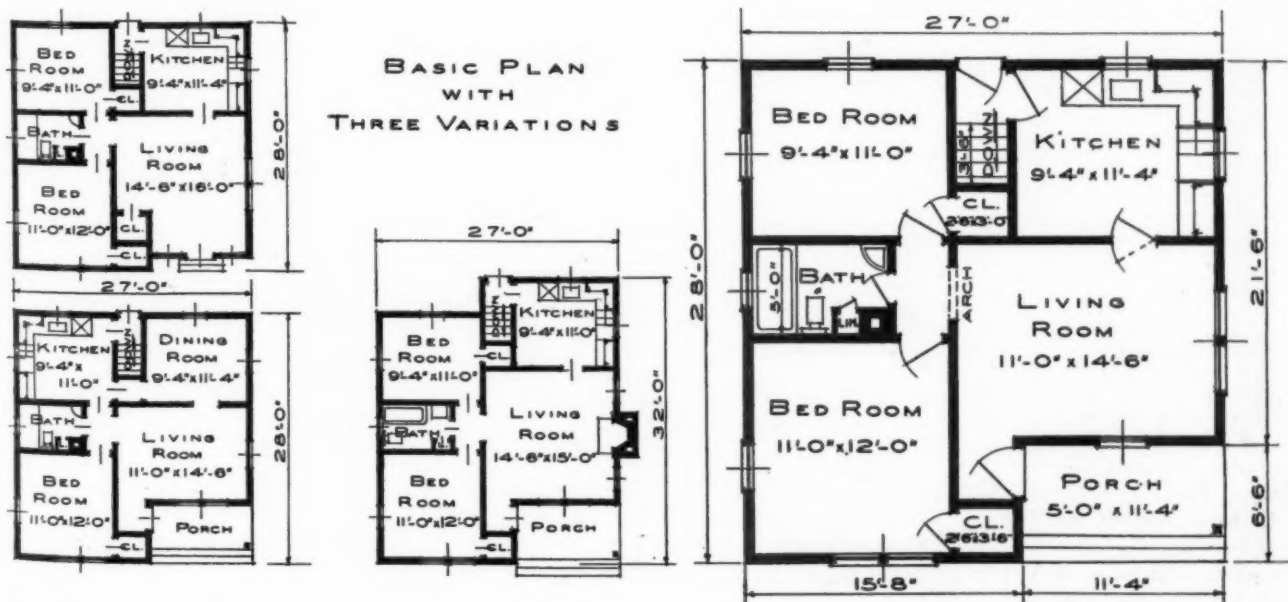
opening McGowan had taken orders for 30 houses within a radius of 10 miles, and was only waiting for a let-up in the severe weather to get many of them under way. He expects to build between 75 and 100 houses during the course of the year.

McGowan's model house and basic plan are clever, practical and economical. There is no waste space, yet rooms are large enough for comfort, having good cross ventilation.

An outstanding item that helps keep his costs down, according to McGowan, is the use of dry-wall construction throughout. His living room is paneled in decorative Douglas fir plywood panels which have vertical beads that give the walls the effect of wide random-width vertical board paneling. The plywood is painted an attractive eggshell white. The kitchen is also finished in plywood and in the bedrooms he uses both plywood and decorative insulating boards.

Part of the charm of the living room is due to the use of a decorative frieze which McGowan has designed, made up of a strip of 1 by 4, a crown mould and small blocks of latticing— $\frac{3}{8}$ by $1\frac{3}{4}$ by $2\frac{1}{4}$ inches in size, individually nailed in place.

(Continued to page 140)



McGOWAN'S solution of the low-cost house problem is the 27' x 28' basic plan at right. He has worked out standard variations, as shown, and will quote a definite price on the house built on the owner's plot or on land supplied by McGowan.



New Features in Evanston, Ill., Apartment

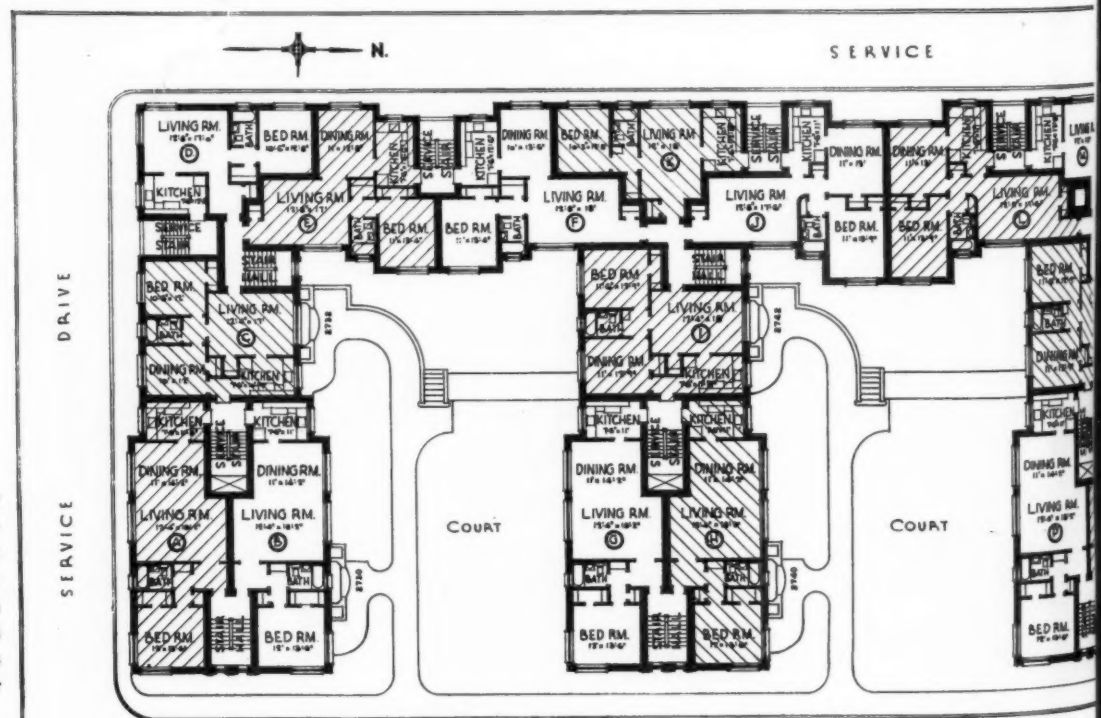
IN order to justify the higher rentals at which most new apartment projects must seek tenants in competition with older existing structures, designers and builders generally have incorporated into such buildings all the latest of planning technique and equipment which has recently been developed. Consequently, larger multi-family buildings such as the Isabella Park apartments completed a short time ago in Evanston, Ill., and illustrated on these pages show many improvements in the type of accommodations offered.

This project contains 91 apartments of 3, 3½, 4 and 5 rooms each, arranged in five projecting wings extending from the main portion of the building on a site, 439 by 174 feet. Financing was handled with a \$400,000 mortgage insured by FHA out of a reported total investment

of \$600,000. Burnham & Hammond were the architects who designed the three-story and English basement building under FHA supervision. The Northwestern Company of Evanston, of which Richard C. Johnston, Jr., is treasurer, as well as president of the Isabella Park Building Corp., was the builder. John M. Smyth Co., Chicago, furnished the model apartments.

The amount of the site covered by the building and the use of the unoccupied area for courts, drives and parkway as well as the relation of the individual units to these outside features is particularly interesting. The end-to-end double "E" shape of the structure provides four wide courts as shown in the plan below. These open on a parkway separating the apartment from a landscaped park that acts as a buffer for the residential section be-

PLOT and typical floor plan of 91-unit four-story apartment structure in Evanston, Ill. All apartments have windows on either two adjoining sides or opposite sides for cross ventilation. Service stair halls are concealed.



OPPOSITE PAGE: Architect's perspective of Isabella Park apartments designed by Burnham & Hammond. Corner windows and glass block panels between the triple vertical decorative motifs at the ends of the wings give a distinctive modern appearance.

RIGHT: The court view shows how good light and air are available to the units facing them. In the close-up of the entrance, a window of one of five units, each located in the front of the wings at grade level can be seen; floor plan on next page.



yond. Service drives and the street adjoining to the north give access to the other three sides of the building.

The wide courts assure free access to fresh air and sunshine and are attractively landscaped with terraces at the back as illustrated in the above view.

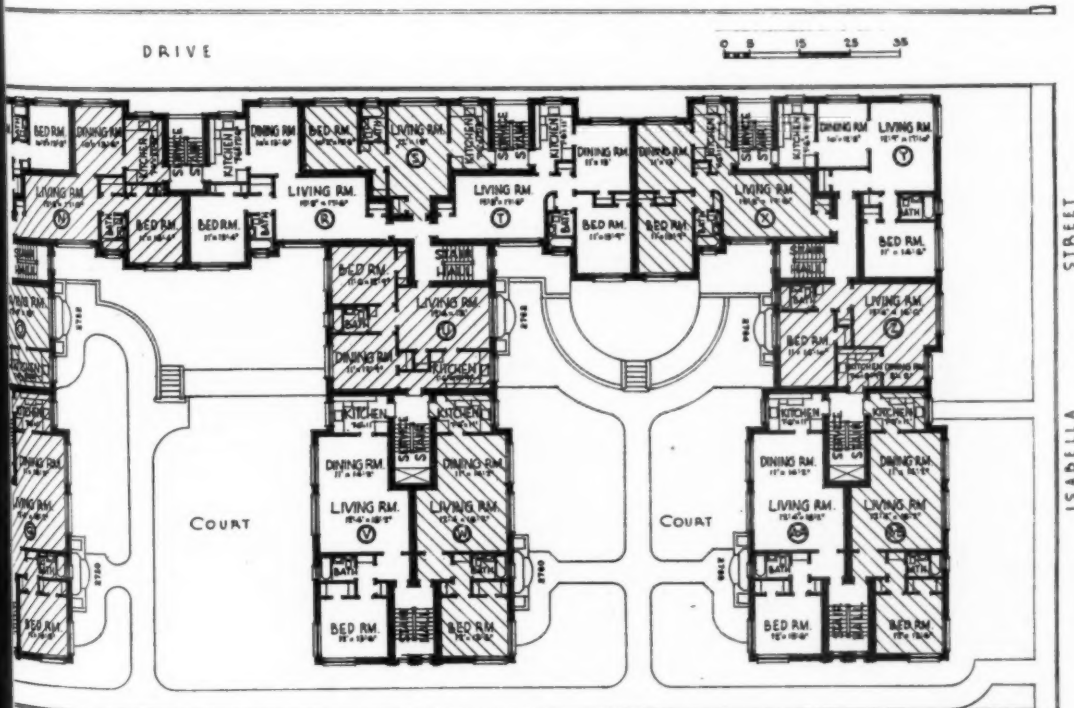
Wide window areas of the Fenestra casements and decorative glass block inserts arranged in a vertical treatment of brick fluting to light the front stair wells give a decidedly modern styling to the exterior. Rear stair halls are entirely concealed from the front. Exterior construction is face brick veneer on Waylite block and hollow brick laid up as a 12-inch wall; trim is Indiana limestone. The first floor is of reinforced concrete construction; other floors have 2 x 12 and 2 x 10 joists, with 2 x 8 roof joists covered with a 20-year Koppers built-up

asphalt roof. Third floor ceilings are insulated with USC Red Top glass wool; all flashings are copper.

On the interior 3-coat plaster is used over waterproofing on exterior walls, on Pyrobar for first floor, and on Rocklath for interior partitions. Detroit Steel Products Company's steel fire doors shield the service entrances to apartments; other doors are one-panel pine by Carr, Ryder & Adams.

One of the equipment highlights is the use of American Radiator cast iron convectors which contribute to a more refined interior appearance. Heating system is with one-pipe steam supplied by two Kewanee boilers which are fired with two Link-Belt stokers. A central incinerator has been installed.

The layout of the various apartments has been planned

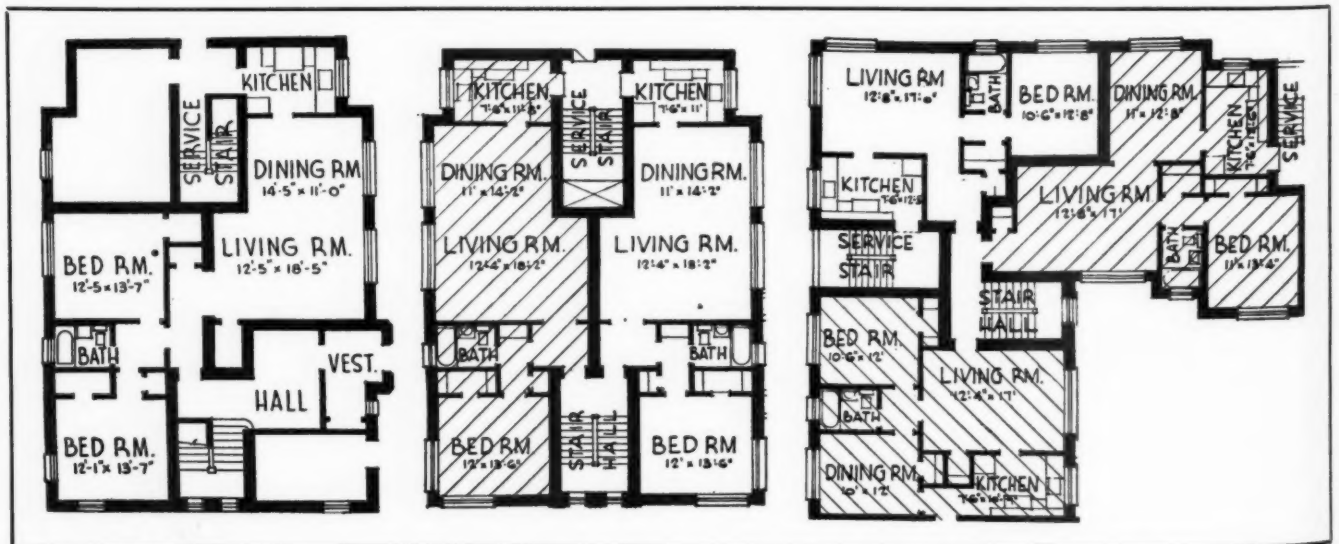


PLANNING for maximum space utilization evolved two variations in the four-room units, one combining dining-living into a single good sized room, the other providing a dining room which may be used as a bedroom. Larger scale plans on next page.

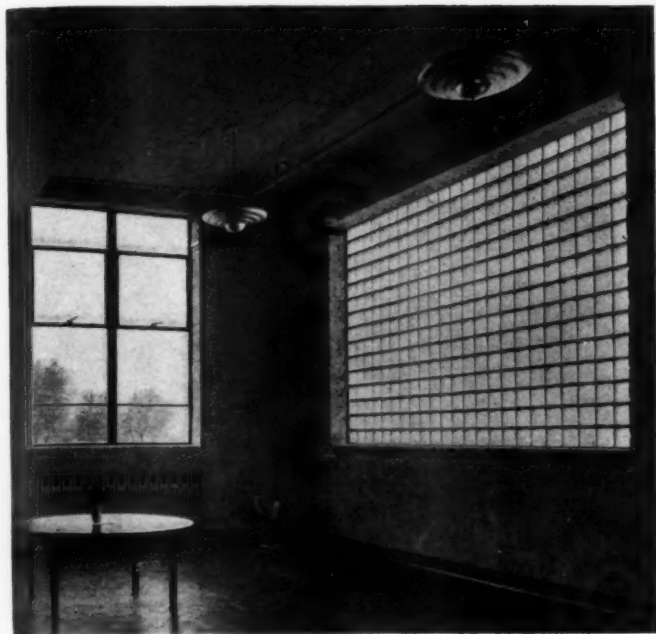


THE two larger interior illustrations above show opposite ends of the combination living-dining room (center plan below indicates arrangement of this type unit located in the front tiers); this was one of the apartments furnished for public inspection by John M. Smyth Co., Chicago. The view at top left shows corner window in bedroom of this same apartment. Note concealed radiation behind dressing table. Below at left is plan of one of the five first floor apartments which proved to be exceedingly popular.

to offer the best use of space for convenient living and wall space for proper furniture placement. Rooms are slightly larger than those in the average apartment building. Living rooms range between 13 by 18 feet to approximately 14 by 19 feet. In the front apartments, living and dining rooms are combined to give an open arrangement having an overall dimension of slightly more than 18 by 23 feet as shown in the two larger views above. Another unusual arrangement is found in the four-room units which have the dining rooms so arranged off both kitchen and connecting hall to bath that these rooms can be used as second bedrooms, closets being provided. Other materials and equipment include: Standard Sanitary fixtures in bath, Hess medicine cabinets, Bruce block oak floors, Nairn linoleum, Cambridge tile in bath, Corbin hardware, kitchens equipped for convenience and efficiency with built-in St. Charles units, Westinghouse refrigerators, A-B gas stoves, General Regulator ventilating fans. Rents range from \$55 to \$90.



ABOVE: Typical first floor five-room layout, four-room combination, two variations of other four-room units, one of three-room size.



Photos by Elemer L. Astelford.

EXPOSED cinder masonry, with bull-nosed units for window sills, glass block and fibre ceiling tile are used in this modern school.

Designing Schools for Economy and Low Upkeep

By Peter E. Brender

Brender and Beam, Architects and Engineers,
Wayne, Michigan

REAL and not false economy has provided School District No. 9, Nankin Township, Wayne, Michigan, with a new firesafe school at a cost of \$8,650 per room, or \$217 per pupil.

Economy was the watchword all along the line—from design to finished structure. The school district had but \$42,825 of its own funds with which to supply much-needed accommodations for the 360 children in the district. This was supplemented by a PWA grant of \$35,038, making the total \$77,863.

To the limitation of funds was added the requirement of the state school law that the building be fire-resistant. This meant that the building be constructed of firesafe materials. Also, the school district required that classrooms be larger than are usually built to meet modern educational needs. Finally, that type of structure was demanded which would incur the minimum of maintenance.

Reinforced concrete was selected as the structural material. Exterior walls were finished with 4-in. face brick; interior walls and partitions were built of exposed and painted cinder concrete masonry units.

Design of the building was directed toward two objectives: to make the working drawings and specifications as simple as possible, and to reduce waste space to the minimum. Plans and specifications were drawn to avoid special interpretations for either contractor or owner, and to obtain the minimum number of changes after construction had begun.

As to waste space, so carefully was the building designed that not even attic space was reserved between ceiling and roof. Thus, the maximum cubage was secured.

Simplification of design resulted in erection speed, another factor which contributed to economy. Only ten weeks elapsed from the start of construction to placement of the slab roof.

The type of structure was found to be economical of labor cost since, for the most part, common and semi-skilled workmen could be used. These were locally employed at the reasonable going rate.

Concrete masonry units for interior partitions as well as interior walls were chosen not only because of their substantial structural qualities, but also for their acous-

(Continued to page 151)



HALLWAYS and classrooms of new school in Wayne, Mich., are designed to meet modern educational needs.



A PORCELAIN enamel front has been applied to this station; in all-plywood jobs, joints do not show.

How to Build Low Cost Service Stations

FOR a number of years the petroleum retail marketers and suppliers have realized that with the smaller gallonage they are now selling per outlet and the reduced spread it is necessary to keep the retail outlet investment very low. In order to be profitable, owner-operated stations or those built to lease must be erected at a price which allows the former low occupancy cost or the latter a rent that the lessee can pay.

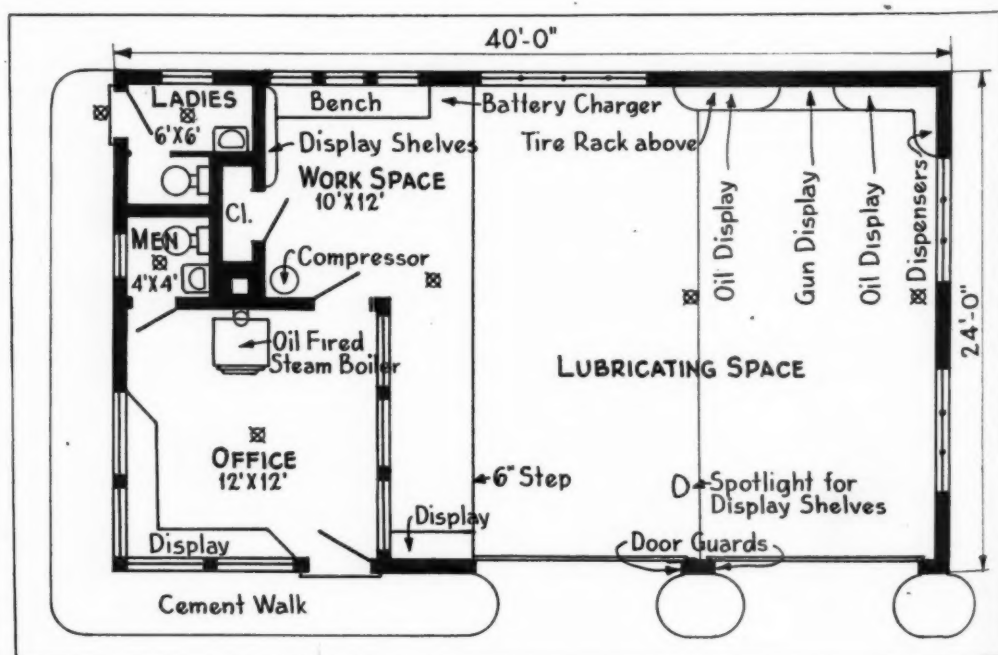
The Atlantic Refining Company in New England, in finding a solution to this, has built a number of plywood service stations. Such stations are of the same general

design and have the same general construction details as a group of stations built in the Middle West by W. A. Park, service station consultant. These show the simplicity of plywood construction, as detailed in this article, and its exceptional results.

The work is entirely field fabricated by local contractors; the materials used are standard as shipped from manufacturers. The frame is the usual 2 x 4 construction with studs 16 inches on center.

The plywood that is used in the service stations is purchased from one of the several mills making a water-

TYPICAL service station arrangement, as in the plan at the right, is compact but not crowded to the extent that any needed facilities have to be omitted. Lubrication display board and oil display are arranged along the rear wall space to the right while other service equipment is properly placed in the work space. The white painted plywood interior walls are easily kept clean.



proof plywood unconditionally guaranteed against ply separation and is the same material that is now used by several companies in the manufacture of boats. It is obtained in lengths equal to the height of the building and in four-foot widths, so that no horizontal joints are necessary. Because of this, the building is entirely laid out in modules of four-foot widths; that is, all dimensions are multiples of four feet. On these particular stations the height was 12 feet, the depth 24 feet, the bays or stalls and the office 12 feet in width.

The outside plywood is $\frac{3}{8}$ -inch thick, the roof sheathing $\frac{5}{8}$ -inch thick, and all interior $\frac{1}{4}$ -inch thick. Exterior plywood has all long edges shiplapped at the mill.

All plywood is installed lengthwise of the joists, and all plywood is glued to the studs with joints full of resin glue and nailed with 4d nails 6 inches on center.

For the show window a corner design is used, the corner post and mullions 4 foot on center being 4 x 4. Other mullions or division bars are 2 x 4. All show window glass is 3/16 crystal and is set with mastic in rabbet. All other windows are casements, some of which are fixed and some swing out. These casements and the doors are set between studs with no other jambs and stops planted on. The sills for the windows are rabbeted, however, and with a drip. Thresholds are metal. No casings, trim or battens are used, giving a smooth, straight surface that is easy to clean, costs less to maintain and is less expensive and better in appearance. On flat roof buildings an Armco or Toncan iron coping is used.

These stations have shown no difficulty in heating; however, they can be further insulated by installing a fibre paper or a blanket insulation between the studs.

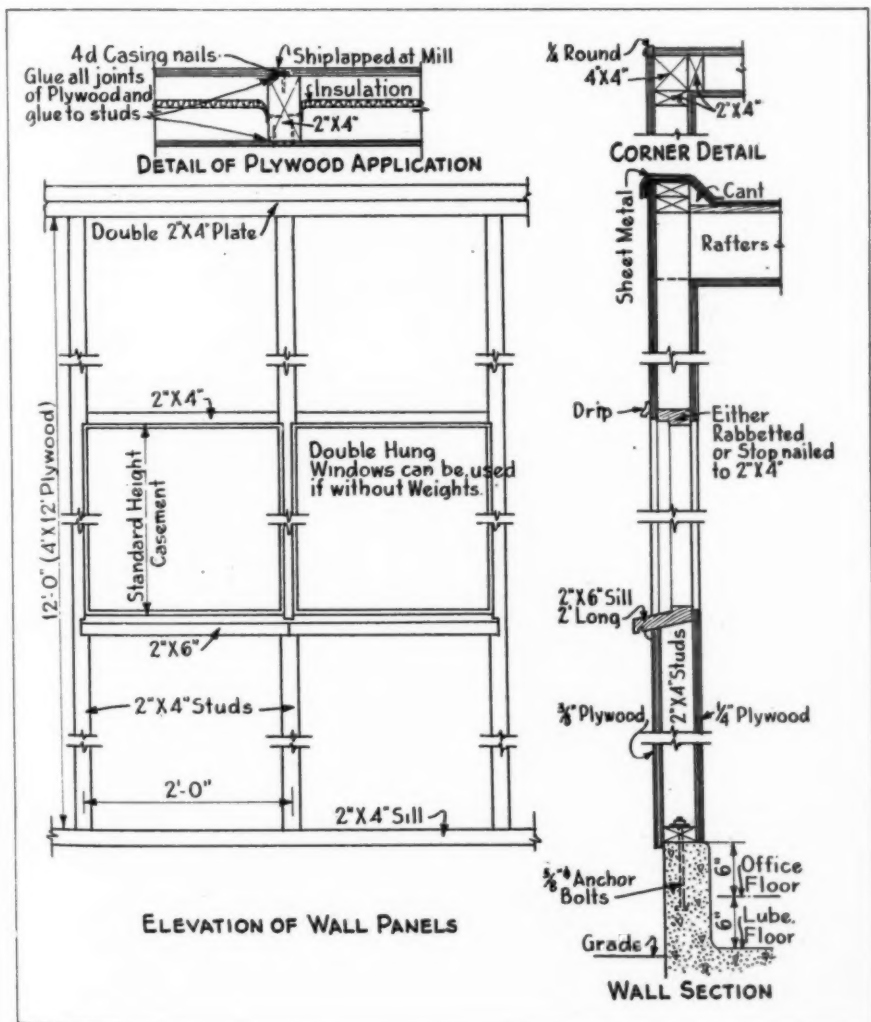
All exposed wood is primed with a resin primer which completely eliminates any grain raising. It is then finished under usual painting specifications (less the primer) and if desired, the surface can give the appearance of porcelain enamel. It has been found that these buildings should be painted once in three years (on the western stations that have been up that long), and in the meantime they are kept clean and new in appearance through washing. The smooth, straight surface makes this easy and quick to do.

The foundation is run several inches above the floor, making a sanitary cove base, protecting the bottom where the most abuse is, and giving additional height to the building. In all these stations, the lubricating room is a step down from the office, thus providing for the customers to drive in at grade level and making it possible to get a protecting walk around the building that adds to appearance and also may be used for display.

On a number of these stations porcelain enamel fronts have been installed and Vitrolite can be used in wash-rooms.

The designer of these stations, on a number that he owns himself, has used 24-foot roof joists with no beam support, with the plywood nailed and glued, and over a four-year period has found no sag whatever. He also has tried setting the studs 24 inches on center, in which case there has been an almost unnoticed bulge between studs. Where these studs were 24 inches on center, standard 1'-10" wide casements were used, set between the studs and therefore requiring no stud cutting for windows, the headers and sills being cut in between the studs.

The experience of the designer is that this building costs less than any other type of construction, is stronger, longer lived, has less maintenance cost, and for his purpose is better in appearance.



DETAILS of plywood construction are indicated at the left. The specially designed oil-fired steam heating plant below heats the office by air circulation through the louvers in casing, "lube" room by unit heater and ladies' toilet by wall radiation.



2-Flats Are Easily Brought Up-to-Date at Moderate Cost

TO DEMONSTRATE what can be done to bring a thirteen-year-old two-flat building up-to-date at reasonable cost, Mills & Sons, Chicago builders, did a complete job on one of a group of such buildings which their real estate department was handling for resale. These buildings were well built and are sound structurally, but recent innovations in planning and equipment indicated that modernization of the interiors would be a good investment since no major changes were required.

The completed job showed a surprising improvement, as illustrated in the views on this page; suggestions will be found here for similar projects, the two-flat having been popular in most sections of the country.

The exterior, except for small items, remained the same. On the interior, kitchen and bath underwent the most striking changes because of new fixtures installed. Floor plan indicates minor amount of partition shifting; the following list in the form of a proposed specification outlines the extent of the work:

KITCHEN—Carpentry: Remove pantry, patch floor, reinstall and furnish necessary trim, new quarter-round, chair rail and ground for same. Remove ironing board, cut off casing heads. Install only new steel sash over sink, furnishing new lintel over steel casements. Furnish and install new stool and apron. Fur out over kitchen cases, and build arch for same. Install steel kitchen cases. Chrome all kitchen hardware and replace, including
(Continued to page 178)

IN THE typical 13-year-old two-flat building below at the left, one of the apartments was completely modernized, as shown in the three interior views, as a public demonstration of the possibilities in such properties. The minor nature of the structural changes required is indicated in the plan at right.





MODERNIZATION of this radio, music and electrical appliance store in Milwaukee, Wis., paid for itself in increased business volume and heating economy within a year's time. The showroom and the studios at the right above have new walls and ceilings of Masonite with recesses for indirect lighting, ventilation and advertising.

Shop Modernizations Pay Dividends

Volume of Profitable Business for the Builder Can Be Secured by Selling Commercial Property Owners on Advantages of Remodeling

NUMEROUS examples are constantly being reported of how both owners and builders are profiting from current programs of store improvement. Such renovations must, of course, be sensibly planned and carried out but there are still plenty of opportunities for the industry to do a real selling job in every community.

For instance, when Jack Goodwin remodeled his radio, music and electrical appliance store at Seventh Street and Wisconsin avenue in Milwaukee he hoped to make some profit through increased business and savings in heating expense.

But he was not prepared for what actually happened.

The modernization paid for itself within a year in increased sales.

The increased volume of business is continuing, at the rate of approximately four to one.

The heating bill has dropped from approximately \$60 a month to \$15 a month.

Mr. Goodwin did not want a half-way job of modernization. He consulted a well-known architect. Increased profits have more than covered the architect's fee as well as the actual building cost. The architect's recommendations were followed throughout.

The walls of the main show room were finished in structural insulation, Masonite. The material is inex-

pensive, and is prefinished in colors. In addition, it was applied in large sheets, further reducing installation costs. No further finishing or decorating was necessary. Recessed openings were made in the walls near the ceiling to accommodate indirect lighting, ventilation equipment and cut-out names of some of the trade lines handled in the store.

Small tiles of the same prefinished wood fibre material were used for the ceiling. This treatment provided both acoustical correction and thermal insulation and made the room light.

Individual demonstration studios for radios and phonographs were finished in the same wood fibre material but with a different decorative treatment. Each of the three studios was finished in a different color combination. The structural insulation was grooved vertically, giving a planked effect. The grooving gives the studios an appearance of greater size, and the acoustical insulation value of the material confines sound to the individual rooms.

Formerly, according to Mr. Goodwin, it was necessary to keep the heat turned on in the store 24 hours a day during the winter months. Now it is turned off at the close of each day's business.

But what is more important, Mr. Goodwin says he now sells as much merchandise in a week as he formerly did in a month.



THIS combination florist shop, garage and apartment building styled in simplified Georgian design provides all needed business and living accommodations for the proprietor. Floor plans, sections and details appear on opposite page.

A Well Planned Building Combines 5-Room Apartment and Small Store

Shop, Garage and Living Quarters Are Grouped for Maximum Space Utilization in Small Chicago Building Designed by Architect Victor L. Charn

THE fact that the owner and proprietor of this Chicago florist shop reports a big increase in his business over the volume done in the establishment he formerly occupied speaks well for the styling and general design of the structure. The pleasing Colonial lines and Georgian Colonial detail have been carefully adapted to a business place of this nature by the architect, Victor L. Charn, Chicago. The outstanding character is given further customer eye appeal by the surrounding buildings which are either of a modernly styled type or of the older, non-descript, commercial structure design.

The front, with its balanced design of two entrance doors flanking a curved display bay on the first floor and a central window and door grouping above, is done in red Colonial brick and Indiana limestone trim. The wood bay, balcony sash and blinds in their simplified treatment, give a certain amount of domesticity to the elevation in contrast to the usually harsh lines of such buildings.

The interior of the shop has a feeling of openness due to the bay effect created by the plastered openings in the rear wall behind which a refrigerated display case is set. Indirect lighting is used.

The storage and work space is lighted by two skylights, one on each side of the building, and a large glass block panel in one wall; if the adjacent property on this side is improved to the lot line, this light from this latter source will of course be blocked off. The two-car garage at the rear is handy for receiving and loading merchandise.

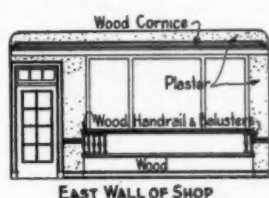
The five-room apartment above has good sized rooms and plenty of storage space. A hinged bookcase balancing one of similar design to the right of the mantel gives access to a closet off the living room. The porch at the

rear is glazed in. The bath and kitchen have wainscot of tile; floors throughout are oak except linoleum in the kitchen and tile in the bath. The heating system consists of oil-fired boiler and radiators, the one in the store being recessed.

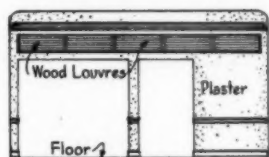


ARCHITECT'S perspective sketch of florist shop.

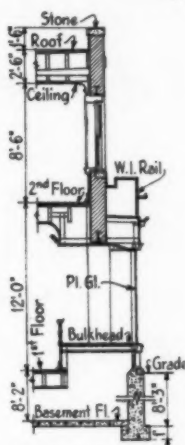
RIGHT: Elevations of front and rear walls of florist shop designed by Architect Victor L. Charn, Chicago. Sections indicate construction at front and rear of building.



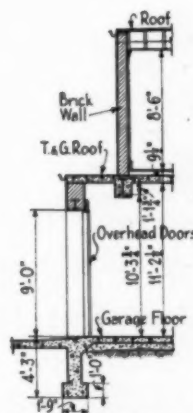
EAST WALL OF SHOP



WEST WALL OF SHOP

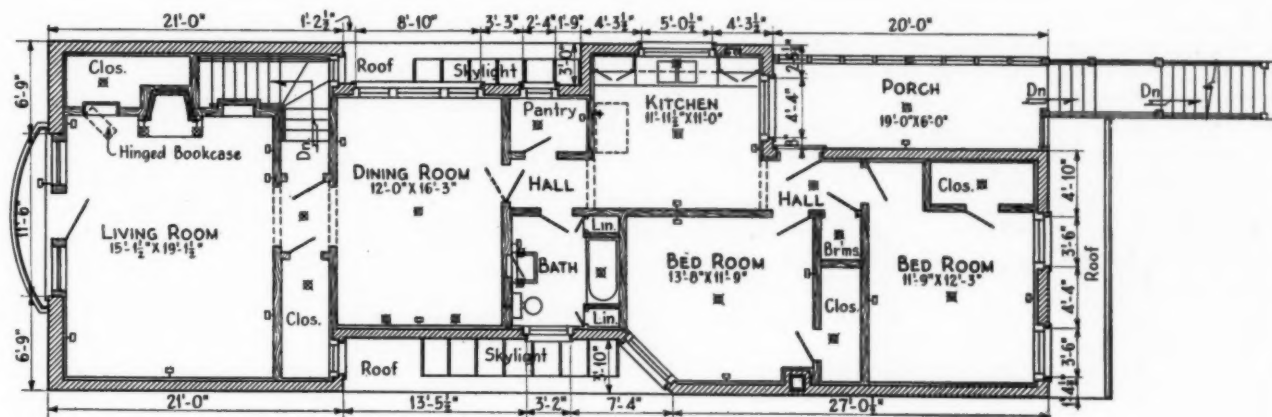


SECTION THRU FRONT

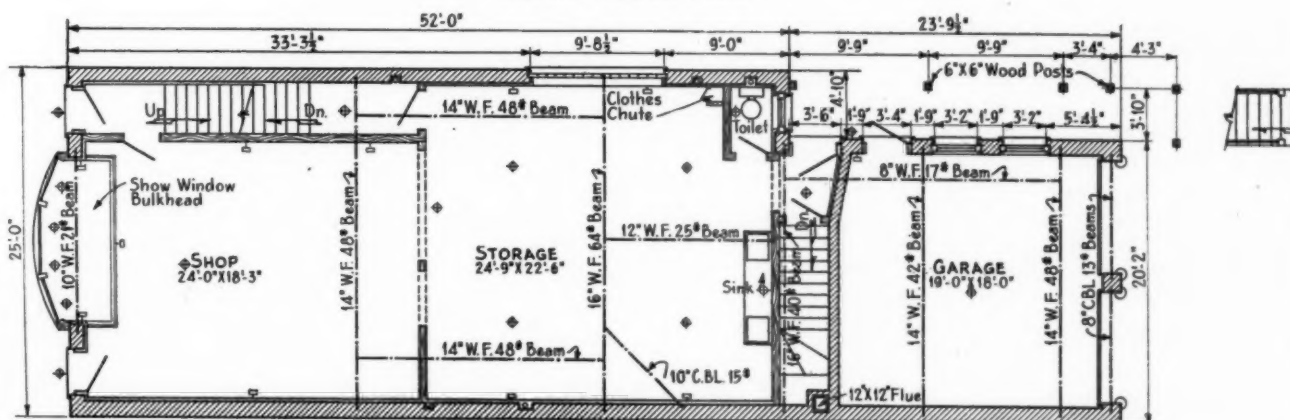


SECTION AT GARAGE DOORS

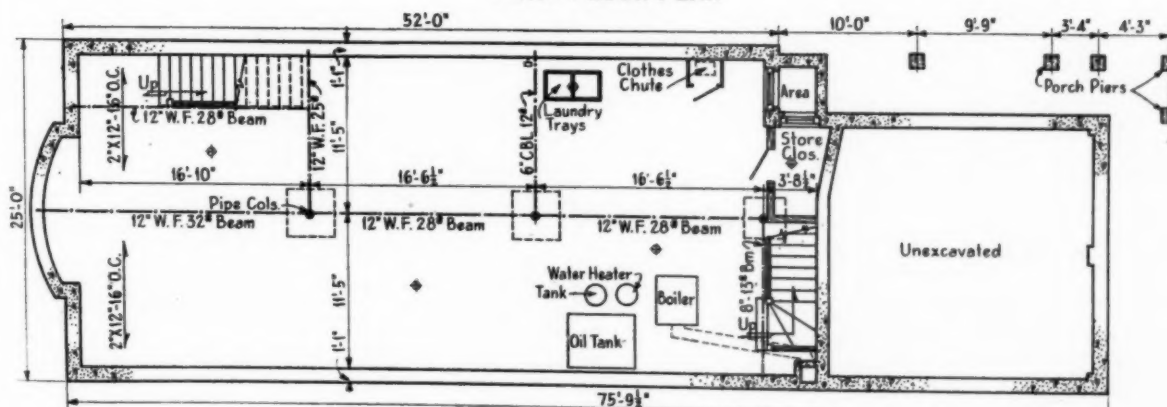
BELOW: Basement, first floor and second floor plans show features of this unusual building arrangement. It is designed to fit on a 25-foot lot.



SECOND FLOOR PLAN



FIRST FLOOR PLAN



BASEMENT PLAN

Finding Length of Common Rafters with Tables on THE STEEL SQUARE

This Third Article in the Series on Important Uses of the Steel Square Explains Rafter Tables and Shows How to Lay Out Various Common Rafters

By Gilbert Townsend

ARTICLES in this series for the two previous months have dealt with the use of the scales and tables of figures which are to be found on the steel square and with its use in the laying out and cutting of the braces which are frequently required in building braced frames and towers. While the carpenter is often called upon to construct such frames, especially in connection with the larger buildings, such as barns or churches, the job on which he is most likely to be working day in and day out is the ordinary dwelling house and here the steel square will prove to be well worth its cost in helping him with the task of framing the roof.

Sloping Roofs

It has been the custom for many centuries to build houses as well as churches and barns with sloping roofs, so that the rain will run off from them as quickly as possible and have as little chance as may be of getting inside, and although large city buildings are successfully constructed with flat roofs and the modernistic trend is towards the use of this type of roof for dwellings also, it will be many years before such roof design will become common. Therefore, carpenters must look forward to framing up sloping roofs for a long time to come. In large houses, these roofs become very complicated due to the shape of the plan, which often has several ells projecting from the main body of the structure and in many cases the angles at which these ells project are not right angles in plan, which still further aggravates the carpenter's headache. Even when brick or stone masonry is used for the walls of such mansions, the roof is almost always framed up in wood by a carpenter with the aid of his steel square.

The complicated roofs with hips and valleys and dormers will be taken up later, but the most usual and fortunately the easiest job of roof framing which a carpenter has to do is the simple gable or pitch roof and this will be dealt with first, the principal features being the ridge at the top, the eaves at the two side walls, and the two gables, one at each end.

Framing for Gable or Pitch Roof

Fig. 1 shows the framework for a "pitch" or "gable" roof, consisting of the horizontal plates resting on top of the vertical studding of the side and end walls, together with the ridge, or ridge-board, also horizontal, and the sloping common rafters. The ridge board extends along the center of the roof for its full length at a level considerably

above that of the plates. The position of the ridge with relation to the level of the plates is determined by two things—the width, or *span*, of the roof between the two outside sidewalls, and the slope or *pitch* of the roof surfaces. The sloping rafters on each side of the ridge bear against it and thus hold the ridge in place. The lower ends of these rafters rest on the plates at the top of the side walls (the *eaves* of the roof) and exert a thrust against these plates which is resisted by the ceiling joists of the top floor (not shown in the illustration), which act as ties between the two side walls. The rafters are called "common" rafters to distinguish them from other kinds of rafters which occur in more complicated roof frames such as will be illustrated and described later on in this series of articles.

The problem which confronts the carpenter is to find the easiest and quickest way to cut the common rafters to the correct length and with the ends properly shaped so that they will fit snugly against the ridge board and on top of the wall plate. Without the help of the steel square, this would be much more difficult than it actually is. Fig. 2 illustrates a section taken through the roof frame. If you could take the roof frame shown in Fig. 1 and saw it in two crosswise with a huge saw and then look directly at the end, you would see something like what is shown in Fig. 2, with the cut ends of the wall plates and ridge showing in section as illustrated and the rafters and wall studs showing in direct elevation in their true length (to scale), and at their true slope. The distance measured right across the building from outside to outside of the wall plates is the *span* of the roof. Half of this span is

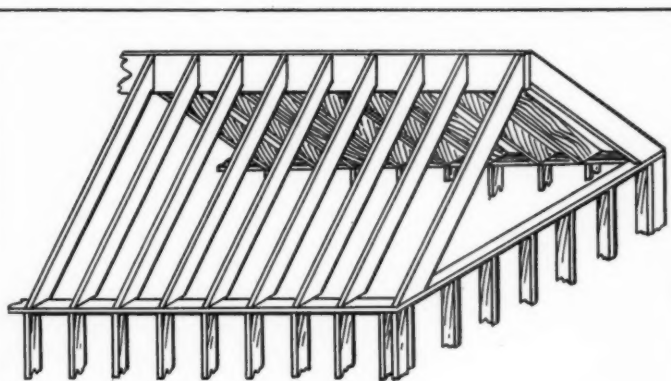


FIG. 1

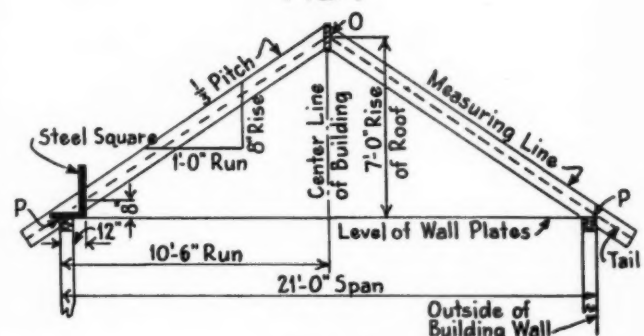


FIG. 2

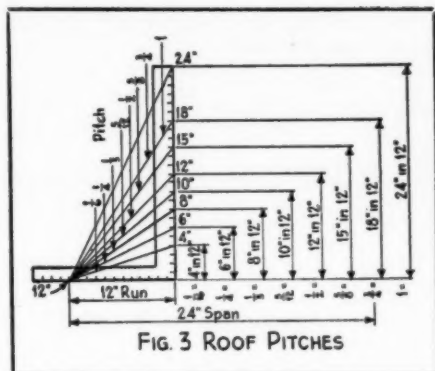


FIG. 3 ROOF PITCHES

called the *run* of the rafters and is the distance measured horizontally from the outside edge of the wall plate to a plumb line passing through the center of the ridge.

Pitch of Roofs

The "run" of a sloping roof is made use of together with its "rise" to determine the *pitch* or slope of the roof and also to find the length of the rafters.

In Fig. 2 the point marked by the letter P is a point on the side of any one of the rafters where the rafter crosses the outside top corner of the wall plate. As will be seen by a study of the illustration (Fig. 2) the point P is not on the line of the lower edge of the rafter nor is it on the line of the top edge of the rafter, because in Fig. 2 the rafters project at the eaves of the roof, beyond the outside of the building wall to form overhanging eaves. In Fig. 1 where there are no overhanging eaves, this point P would lie in the line of the top edge of the rafter. In any case a line drawn on the side of the rafter parallel to its top edge from the point P (where the rafter is to cross the outside top edge of the wall plate) up to the point at which it would intersect the line representing the center line of the ridge board (point O in Fig. 2) is called the *measuring line* and this measuring line is made use of together with the steel square in the task of laying out and cutting the rafters. In Fig. 2, if the line marked "Level of wall plates" is thought of as representing the level of the top surfaces of the wall plates and if a plumb line were to be dropped from point O on the rafter at the center line of the ridge board, then the distance from point O down to the point where this plumb line would intersect the "level of the wall plates" would be what is called the *rise* of the roof. It is the relation of this distance (called the *rise* of the roof) to the *span* of the roof which determines the *pitch* of the roof. If the *rise* is one-half of the span, the roof is a "1/2 pitch" roof. If the *rise* is 1/3 of the span, the roof is a "1/3 pitch" roof. If the *rise* is one quarter of the span, the roof is a "1/4 pitch" roof and so on. In Fig. 2 the *span* of the roof is 21 feet and the *rise* is 7 feet, so the *pitch* of the roof is 7/21 or 1/3 pitch. If the *rise* of this roof had been 10 1/2 feet instead of 7 feet, then the pitch would have been 10 1/2 divided by 21, or 1/2 pitch. If the *rise* had been 5 feet 3 inches instead of 7 feet, then the pitch would have been 5 1/4 divided by 21, or 1/4 pitch.

Rise Per Foot Run

Another thing to notice about the roof framing shown in Fig. 2 is that for a *run* of 10 1/2 feet there is a *rise* of 7 feet, or 84 inches. This means that for each *foot* of the *run* there is a *rise* of 84 inches divided by 10 1/2, which is 8 inches. Thus this roof which has a one-third pitch has a *rise* of eight inches for each *foot* of *run*. A 1/2 pitch roof would have a *rise* of 12 inches for each *foot* of *run*

and a 1/4 pitch roof would have a *rise* of 6 inches for each *foot* of *run*. This is another way of designating the slope or *pitch* of a roof. In Fig. 2 a steel square is shown at the left hand side of the illustration setting on top of the wall plate with the tongue of the square resting on the upper surface of the plate and the blade held in a vertical or upright position against the side of a rafter. The twelve inch mark on the outside edge of the tongue of the steel square is held at the outside upper corner of the wall plate corresponding to point P. The measuring line will then cross the outside edge of the blade of the square at the inch mark corresponding to the *rise-per-foot-run* of the roof—in this case 8 inches.

Fig. 3 shows an enlarged view of a steel square with the tongue horizontal and the blade or body in a vertical or upright position, just as they are in the case of the steel square shown to smaller scale at the left hand side of Fig. 3. In Fig. 3, a number of lines are drawn from the 12 inch mark on the tongue of the square (corresponding to a "run" of 12 inches or one foot) to a series of inch marks on the blade. One of these lines, heavier than the others, corresponds to the measuring line in Fig. 2 and is marked 1/3, showing that a *rise* of 8 inches *per-foot-run* is the same as a 1/3 pitch. The other lines might be similar "measuring lines" on rafters for roofs of different slopes and are marked with fractions to show the pitch of roofs corresponding to various measurements for *rise-per-foot* of *run* from 4 inches up to 24 inches. As noted in Fig. 3, these pitches are also sometimes spoken of as *risers* of so many inches in twelve inches from 4 inches in 12 inches up to a *rise* of 24 inches, in 12 inches corresponding to pitches from 1/6 pitch to full pitch. These roof pitches can always be obtained from the elevation drawing of the gable end of the roof by measuring the distance to scale from top of wall plates to the point where the two measuring lines will intersect each other at the center line of the ridge board and dividing this distance by the distance out to out of wall studs, also measured to scale. This procedure will give a fraction which, with the aid of the square as shown in Fig. 3, can be used to find the *rise-per-foot-run*. Knowing the *rise-per-foot-run* the square can be used to find the length to which the rafters must be cut in order to fit properly into the roof frame and make a finished job corresponding to the drawing. Thus in Fig. 2 the *rise* of 7 feet divided by the *span* of 21 feet equals 7/21 or 1/3 which is the *pitch* of the roof and the corresponding *rise-per-foot-run* is 8 inches, the slope being 8 inches in 12 inches. See Fig. 3.

But perhaps the roof may be of such a type that the

(Continued to page 146)

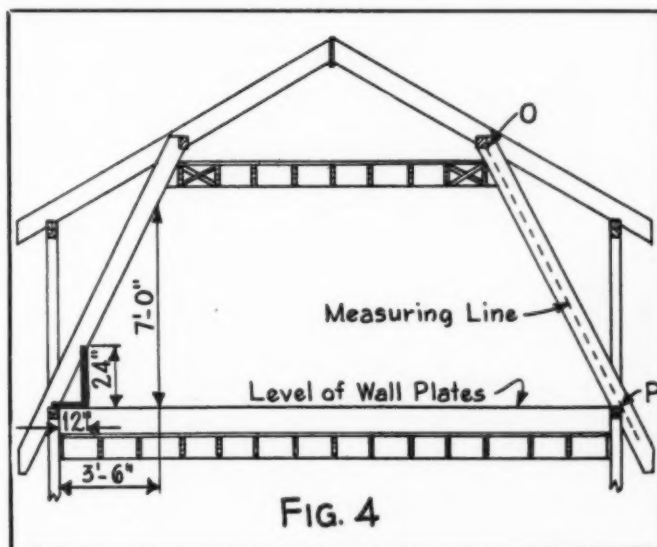


FIG. 4

SHOPCRAFTER'S Corner

Things To Build for Profit or Pleasure

Fences for Privacy and Decoration

AS A means of accenting the style of a house or enclosing certain portions of the yard for privacy, fences are again returning to popularity. However, fences have outgrown their purely practical job as enclosures and, as shown on these two pages, they have definitely become a part of the home; entrance dooryards, service courts, home recreational areas, and front yards can often be made more decorative and useful with fencing. In California, fences are being used more extensively than in most other sections, as these examples indicate.—Hi Sibley.

A SIDED wood frame wall (Fig. 1) with wooden grided windows and top rail set on a masonry base as shown at right screens home in Altadena, Calif.

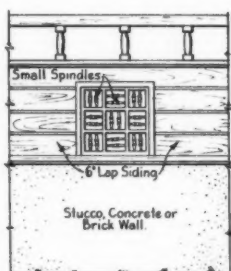
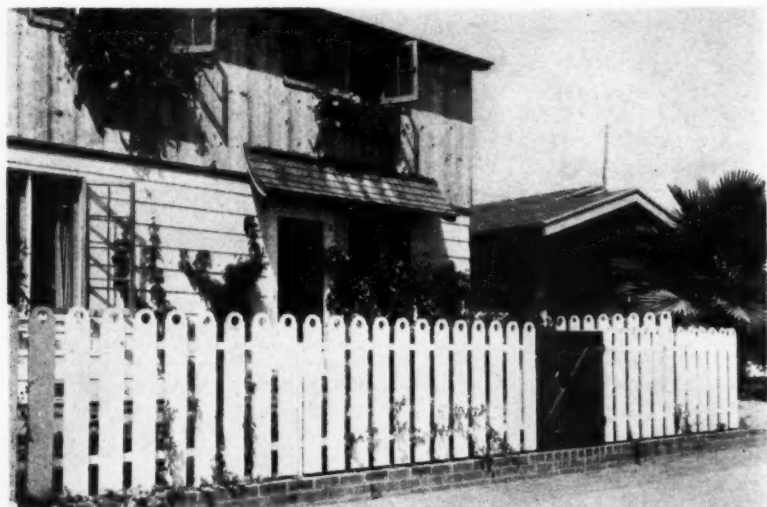


Fig. 1



LEFT: This solid panel gate (Fig. 2) of unsurfaced, unpainted wood assembled with quarter-inch carriage bolts picks up the character of the upper portion of the house; contrasting ornamental pickets harmonize with the siding.

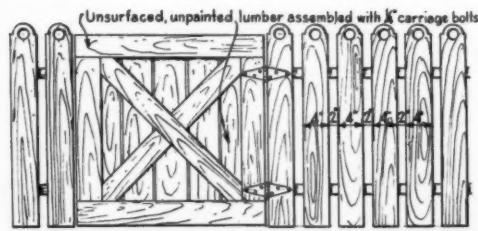


Fig. 2

IN Fig. 3 below, the construction of the service yard enclosure at the right is indicated. Ten-inch lap siding picks up the horizontal lines of the garage door at far right and gable end of wing at left.

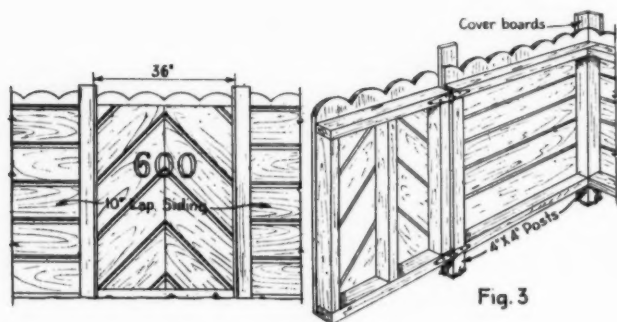
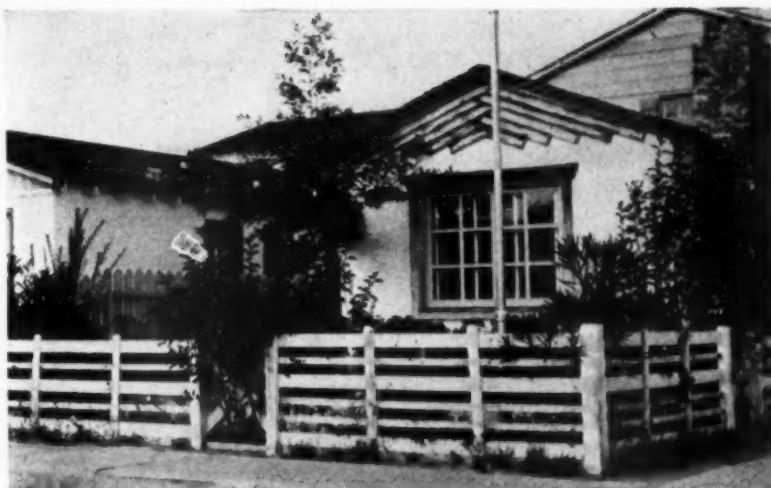
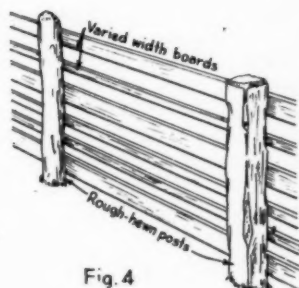


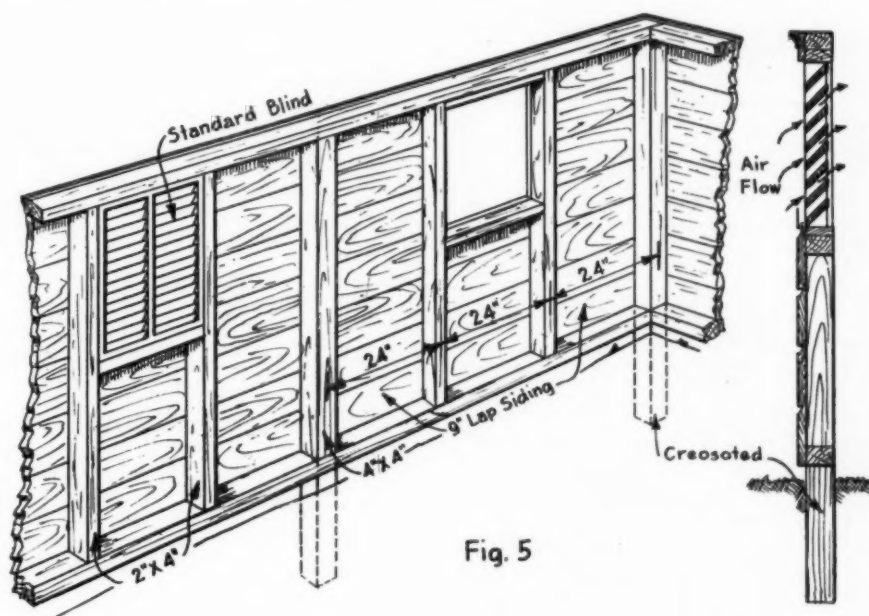
Fig. 3



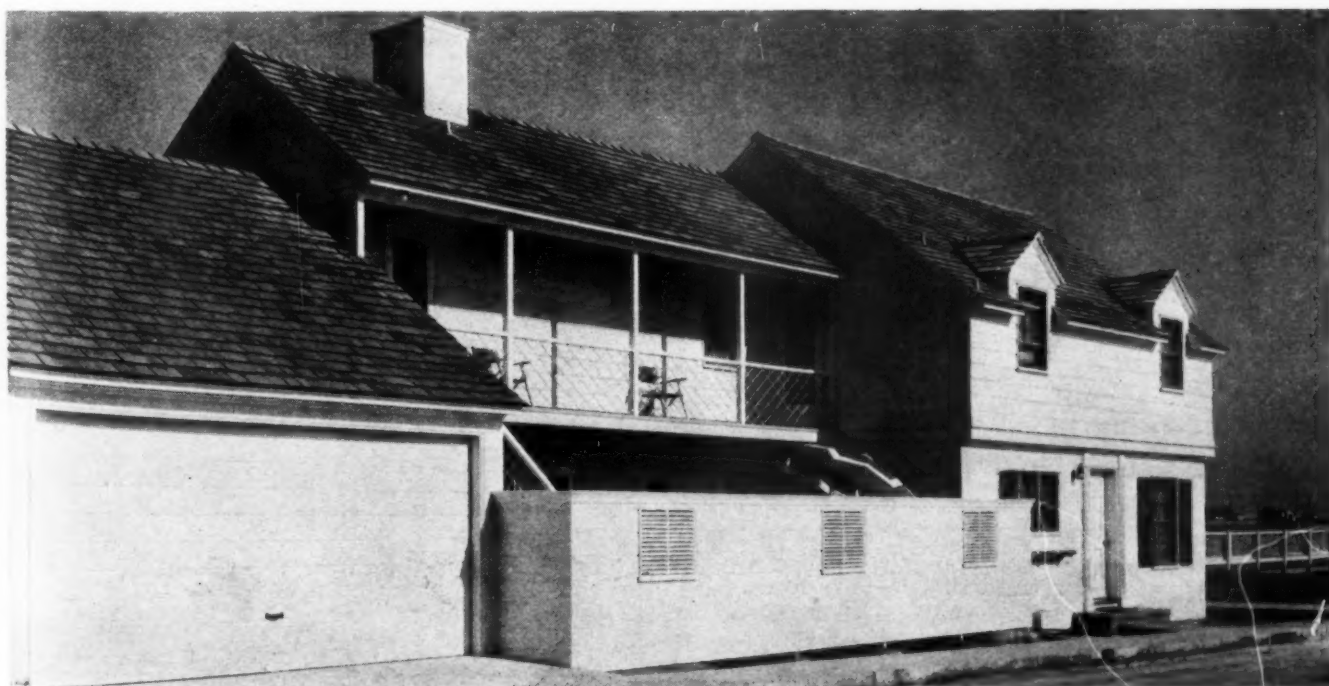
THIS Balboa Island, Calif., cottage has a rustic post and rail fence which is nicely designed in relation to the house; Fig. 4 below shows this type of rough-hewn work.



THE character of the novel siding arrangement in the gable of the above house is picked up in this fence which is finished with whitewash to carry out the similar treatment of the stucco on the exterior wall surfaces.



THE tight 9-inch lap siding wall enclosing the front yard area, as shown below, assures privacy for outdoor relaxation. In Fig. 5 at the right, this construction is shown; louvered inserts allow air circulation while screening interior; chicken wire can be tacked over the framing members to act as a trellis for climbing flowers or vines.





ABOVE: Completed industrial building made of Lindsay Structure.

Prefabricated Steel Panel System for Industrial Buildings

A NEW type of prefabricated, all-steel industrial building has just been developed, in which extra structural strength and rigidity are attained by pulling the steel panel sheets into tension between the framing members.

These new buildings can be used for either temporary or permanent structures. Both roofing and sides are built of patented panel sheets, framing members, and fittings that can be assembled or disassembled "like a Meccano set" by unskilled workers with no other tools than a socket wrench. The structural strength of the materials or their finished appearance is not affected by frequent assembly and disassembly.

This new method of construction was invented and developed by Harvey B. Lindsay, president of the Dry-Zero Corporation, Chicago, and is known as Lindsay Structure. The company erects no buildings itself, but fabricates and sells the necessary Lindsay Structure to specified dimensions and details.

The new Lindsay Structure principle represents a definite break from all traditional methods of putting steel together into industrial buildings. Heretofore, sheet metal has been used on indus-

trial buildings simply as a covering material. Structurally, the sheets have been little more than just so much dead weight. Practically all the load has been carried by the steel framing members. If the framing begins to "work" the stresses are concentrated at the weakest points of the sheets—the rivets, bolts, or screw holes—or the tightest points of the weld.

In Lindsay Structure, every ounce of steel is called upon to contribute its structural strength—even the steel in the panel sheets! The sheets are "pre-tensed" to instantly resist the slightest movement of the framing, and the load is distributed over their entire area. This is done by means of a patented flange and tensioner which creates a union between sheets and framing that approximates the full strength of the sheet. With this construction, therefore, it is possible to use lighter gauge sheets and lighter framing, usually with a marked gain in strength.

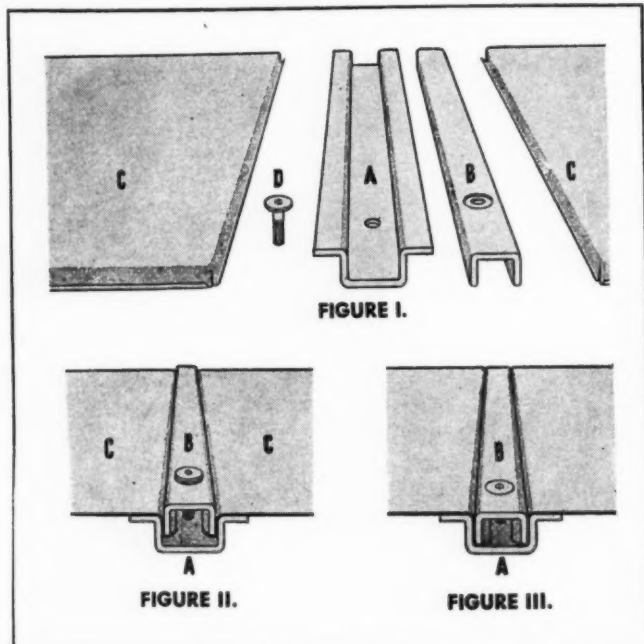
Buildings can be erected of Lindsay Structure in all sizes and styles. Standard Ls materials are fabricated to within 1/2 inch of any desired dimension. The size of the finished building can also be altered by simply adding or removing panels, which can be done without special tools, in a few man-hours.

Lindsay Structure buildings can be built with either flat or pitched roofs. In either case, the paneling is the same on walls and roof. For wide spans, specially designed roof trusses are furnished. Standard parts can also be furnished for either square or rounded corners. Door frames are fastened directly to the Ls frame and window frames are spot welded to the panel sheets. Doors and windows can be replaced by regular panel sections of the same dimension. Thus, their location may be changed at any time without the use of new materials.

All materials in the Ls building are marked to facilitate erection. With the patented Ls method of assembly, parts can be assembled with a simple socket wrench instead of riveting and welding. No cutting or fabrication is necessary. Two men have been able to assemble or take down a 12x9x10 ft. tool house in approximately three hours.

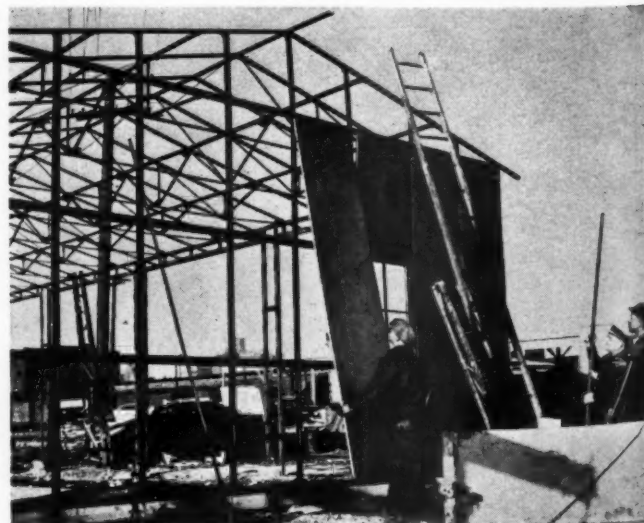
Lindsay Structure is well adapted for portable construction. It can be dismantled as readily as it can be assembled, and moved from place to place and rebuilt any number of times. Its salvage

(Continued to page 149)



ABOVE: In Figure I, four basic elements of Lindsay Structure; A is the flanged frame. B is the "tensioner" which fits inside the channel of the flanged frame. C and C are two panel sheets with patented edges which fit into the flanged frame. D is the patented socket lock screw which draws the tensioner into the channel of the flanged frame. Figure II, elements in place before the union is tightened. Figure III, completed union between frame and sheets.

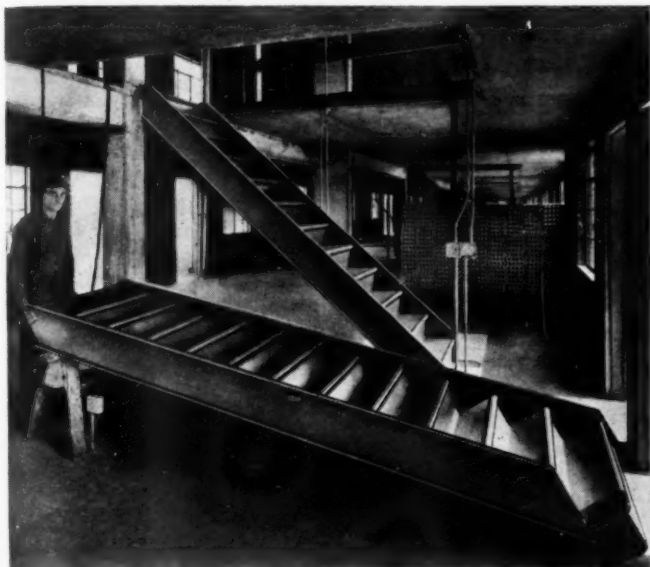
RIGHT: The "tensioner" (B in drawing at the left) is drawn down tight over the edges of the panels and into the frame by patented socket lock screws after panel sheets are applied to frame as below. This draws the panel sheets into tension and gives the structure its strength.



New Products to Deliver More Home Value

J & L Lightweight Channel

THE Jones & Laughlin Steel Corp., Pittsburgh, is now manufacturing the lightest 10-inch hot rolled steel channel section in the world, weighing only 6½ pounds to the foot. Designed to meet the increasing demand for rigid steel stairs in residences, apartments, housing projects and other light occupancy buildings, this new lightweight channel supplies ornamental metal manufacturers with a product of true shape and accurate dimension of known structural quality steel, and is stronger than cold formed steel channels of equal weight. It meets all demands for safety and comfort, giving the protection of sound structural steel.



FACTORY-built lightweight steel stairs of new channel section.

Finish for Asbestos Cement Siding Shingles

A NEW process finish for asbestos cement siding shingles, called "Glatex," has recently been announced by the United States Gypsum Co., Chicago. The finish is a permanent mineral glaze baked on and into the shingles at high temperature, from which oil, grease, soot and other stains can be removed with soap and water; acids do not affect it.

"Glatex" is now available in two designs—wavy edged and clapboard. The wavy edge is available in white, cascade green and silver brown, the clapboard in white alone. The wavy edge design is textured to resemble fine wood graining, and the clapboard has a smooth surface.



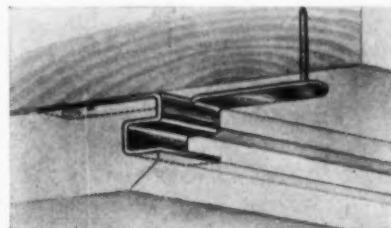
ASBESTOS siding shingles have finish of permanent mineral glaze.

Blind Nailing for Interior Finish

A NEW method of applying insulation board interior finish has been announced by the Wood Conversion Company, St. Paul, Minn., manufacturers of Nu-Wood. It is known as the Nu-Wood Clip System. The clip is so designed that it can be applied either on the tongue or groove joint of Nu-Wood Kolor-Fast and Sta-Lite Tile and Plank, and can be fastened to the material before the units are placed in position for nailing. As shown in the illustration, one end of the clip is rounded and the other is square.

This enables the applicator, through his sense of feel, to determine which end is to be applied to the unit, depending on whether he is working in the tongue or groove edge. Because of this feature, the applicator can work out from the center of the room in all directions.

Nu-Wood clips are available through retail lumber dealers in boxes of one thousand.



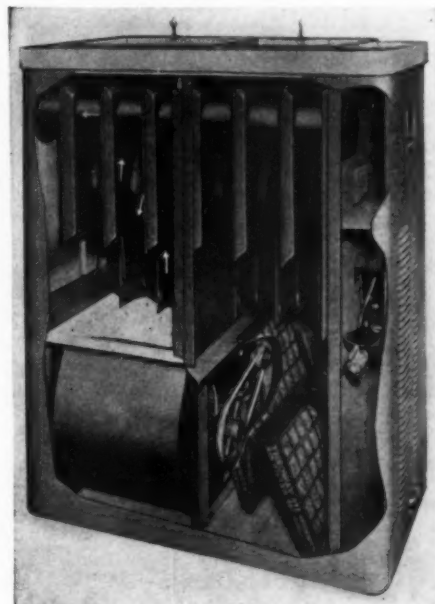
NEW ceiling clip takes tongue of finish on one side and fits insulation board groove on other.

Conco Gas-Fired Units

THE Conco Corp., Automatic Packaged Heat Div. of H. D. Conkey & Co., Mendota, Ill., has just announced its new line of automatic gas-fired heating and conditioning equipment, the new units to be marketed in connection with the Conco stokers and oil-fired equipment through established dealer outlets.

The new line is comprised of three new series of heating and conditioning equipment—gas-fired air conditioners in two models, gas-fired gravity heaters and three gas-fired wall and floor heaters. The various units are available in a range of sizes to cover both domestic and semi-commercial installations.

The new Conco gas-fired air conditioners operate in completely enclosed, tamper-proof cabinets, the heating element of each being formed from pressed steel sections welded into a single, rigid piece. Important safety features include an automatic pilot, a fan and limit switch to protect the unit from overheating, and a pressure regulator to maintain a constant gas input under fluctuating line conditions. Both new models are thermostatically controlled, and leave the factory completely wired, assembled and ready for installation.



ONE of the available models in a new line of gas-fired winter air conditioners.

"Thrift-Pak" Attic Ventilator

THE Rex-Airate "Thrift-Pak," manufactured by Air Controls, Inc., Cleveland, Ohio, is a package unit attic ventilator of special interest to small home owners. This unit, which is well constructed of steel throughout, is installed in attic with the ceiling grille in place beneath the vent box, and delivers a generous volume of air. It should be started after sundown to exhaust the heat that has accumulated in the house and attic during the day, replacing it with cool night air which is drawn in through open doors and windows. Included in the package unit are a quiet fan in steel cabinet, all-steel vent-box, expanded metal ceiling grille,

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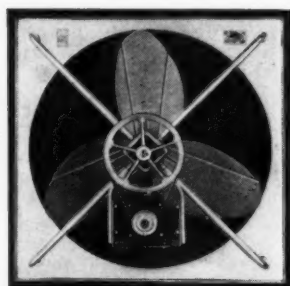
and rubber-coated connector. Air delivery when allowance is made for resistance of vent-box and grille is 4100 C.F.M. The approximate shipping weight is 140 pounds.



UNIT attic ventilator is rated by A.S. H.V.E. standards.

Improved Coolvent Attic Fan

THE Autovent Fan & Blower Co., 1806 N. Kostner Ave., Chicago, has announced further improvements in its line of Coolvent attic fans for drawing in cool night air and circulating it through the house. Motor is mounted directly below the fan shaft on a sturdy sheet steel pedestal which can be adjusted for proper belt tension. Fan is supported by steel tubing; self-aligning ball bearings are mounted in new flanged type rubber pillow blocks for quietness. A low cost suction chamber and ceiling grille assembly is now available to complete the system.



FAN wheel diameters for attic fans range from 24 to 54 inches; operate at slow speeds from 281 to 577 RPM.

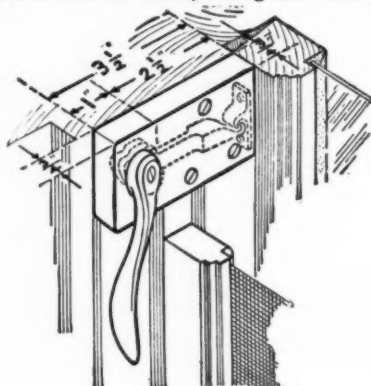
Combination Window Screen and Storm Sash

A NEW combination screen and storm sash with special ventilating and interchanging features has been placed on the market by the Phenix Manufacturing Company, 2684 North Humboldt Ave., Milwaukee, Wis. The combination window frame and sash is made of weatherproofed clear cut Ponderosa pine with joints secured by the company's wedge-lock joint construction. Of unusual interest is the easy removal and interchange features of either the screen or storm window. Everything operates from the inside with a special lock and bolt fastener developed by the company.

When used as a storm window the insert can be lowered in a jiffy, providing draughtless ventilation through the top and sides of the lower panel. As a screen, for summer use, the inside window can be left open at the top to provide constant ventilation and protection against rain storms.

Relief for Sticking Casements

THE H. B. Ives Co., New Haven, Conn., is manufacturing a casement operating fastener which works through the screen to draw in or push out any casement sash which has a tendency to stick due to swelling caused by dampness. If sash sticks, lifting the handle of the Ives fastener frees it instantly, and likewise the device reaches out more than a half-inch to draw in a casement and close it snugly.

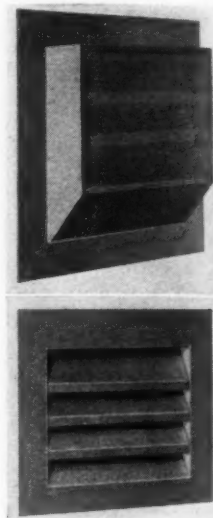


SKETCH of window jamb showing casement operating fastener which assists operator to open or close.

All-Steel Ventilating Louvre

A NEW all-steel louver ventilator, made in four standard sizes for home construction, has been designed and is offered by the Milcor Steel Company, Milwaukee, Wisconsin. It is made of galvanized, weather-resistant steel and is painted before shipment as an added protection. A special feature of the ventilator is its thin louver blades which, the manufacturer claims, permit the passage of more air than is possible in other type ventilators. If for some reason it is desired to close the ventilator, a wire fly-screen covering the inside can be removed and sheet metal or cardboard slipped into position to prevent the entry of cold air.

It is stated by the Company that the advent of airtight, insulated home construction has made the need for winter ventilation fully as important as are its cooling advantages. This has been brought about through the necessity of providing means for the escape of moisture laden air which would otherwise condense in walls and roofs, causing damage and rapid deterioration. The new ventilator was first put on the market a few months ago and the manufacturer reports that it has received the ready acceptance of building men.



RIGHT: Rear view of louver showing screen and, below, the outside view.

"Protective Eye" Door Knocker

WITH the handsome and entirely innocent appearance of a door knocker, a new safety device called "Protective Eye" allows the housewife to look out and inspect any caller. In its center is hidden a bull's-eye of "one-way glass." This is the secret of the device which is made by the Chicago Venetian Blind Co., 39th & Michigan, Chicago, because one cannot see in from the outside.

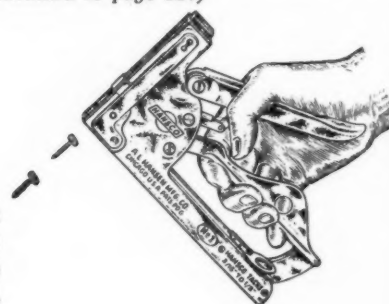


NEW device prevents intruders from entering home before being inspected by housewife.

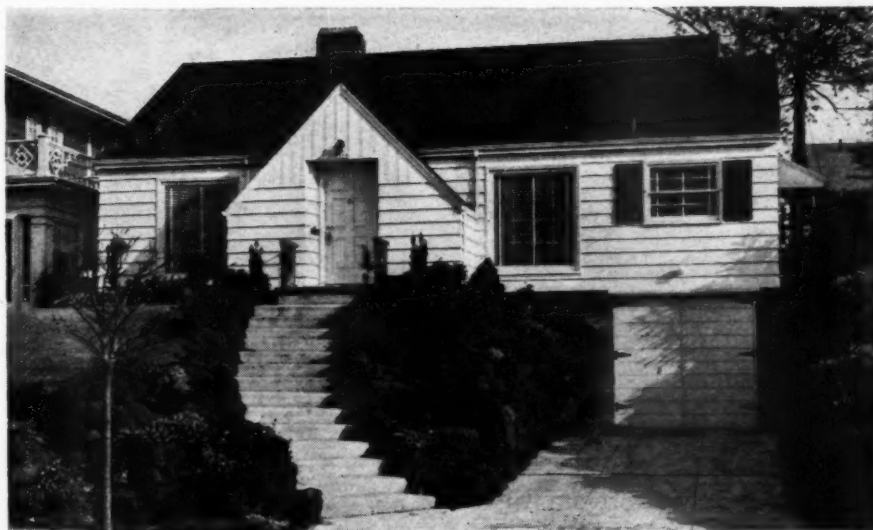
One-Hand Tacker

A MECHANICAL device that "spits" tacks as fast as the hand can grip is the Hansco Model T-1 Tacker, a product of the A. L. Hansen Mfg. Co., 5059 Ravenswood Ave., Chicago. This device drives a specially designed tack, with a slender, streamlined head and a pin-like leg, having great penetrating and holding power, which drives into the hardest woods, thin metal or light

(Continued to page 114)



RAPID, precision work can be done with this new tacker shown at the right as it is operated.



**ANOTHER
PRIZE WINNER!**

This beautiful All-Gas home built and designed by T. B. Winship, Portland, Oregon.



**BECAUSE WOMEN
HAVE THE LAST
WORD**

... even in the purchase of a home... sleek, trim kitchens like this play an important part in getting a prospect's name on the contract. "Sell a woman the kitchen... and you've sold her husband the house!"

***GAS* TURNS HOUSES INTO HOMES**

PROSPECTIVE BUYERS nowadays are looking for homes that offer all the comforts and conveniences of modern living.

That's why Gas and Modern Gas Appliances have become such record-breaking salesmen!

Gas, because it's clean, economical... up-to-date. Gas Appliances, because they are so good looking and compact... so perfectly suited to the American home of today!

Because gas-equipped homes sell easier, faster... they naturally bring bigger, surer, better profits. Thus, it is sound salesmanship—as well as good design—to let "Gas Do The Four Big Jobs" of cooking, water-heating, refrigeration and house-heating!


PROFIT FOR YOU! You can make more money by installing gas equipment for the "4 Big Jobs." Ask your local gas company for information!

AMERICAN GAS ASSOCIATION

LET ***GAS***
DO THE 4 BIG JOBS

**COOKING
WATER HEATING
REFRIGERATION
HOUSE HEATING**

Be sure the gas appliances you specify bear the Approval Seal of the American Gas Association Testing Laboratories.





Build BETTER BUYS for QUICKER SALES

WOLMANIZED LUMBER* makes houses
better built, easier to sell.

If you want to speed up the sale of houses you build, put yourself in a position to say this to prospective buyers:

"This house is a better buy because it has dependable protection against termite and decay damage. See," (you point to *Wolmanized Lumber*) "we have used Wolmanized Lumber at the points where termites and decay first attack. This gives you lasting protection, yet it adds less than 2% to the cost of the house—a fraction of what one repair would cost."

This selling point hits the mark. Wolmanized Lumber is the one protective material which is clean, pressure-treated under one standard specification, and sold under one brand throughout the country. Banks and financing agencies approve it.

Ask us to send you selling helps which will help you sell houses in which Wolmanized Lumber is used. **AMERICAN LUMBER & TREATING COMPANY**, 1406 Old Colony Building, Chicago.

LOW COST FOR FULL PROTECTION—Because Wolmanized Lumber used at the danger points, joists, sills, and subfloor, protects the whole structure, effective protection with it adds less than 2% to the total cost of the house.



*Registered Trade-mark



WOLMANIZED LUMBER

(Continued from page 112)

weight tin. The tacks are in strips of 100 tacks per strip, packed 5,000 tacks per box.

The tacker weighs 1½ pounds; it has a narrow width front, capable of driving in close or narrow spaces and permitting flush tacking, and its handle has a hold-down spring, ingenious in design, which holds down handle for carrying tacker in pocket.

New 3½ End Dump Mixer

A NEW 3½ End-Discharge trailer-mixer has been added to its line by Lansing Co., Lansing, Mich. Lightness and proper balance assure high speed trailing and easy, quick placing on the job. Features include air-cooled engine, Hyatt and Timken bearings, self-cleaning mixing blades, easy tilting wheel and cushion, steel or pneumatic tired wheels.

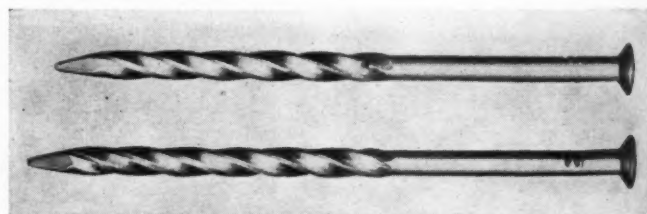


END discharge permits greater efficiency in loading barrows; discharge height, 27 inches.

Screw-Tite Spiral Flooring Nails

THE Independent Nail & Packing Co., Bridgewater, Mass., is manufacturing Screw-Tite nails, which are made from special steel by an exclusive process but in much the same manner as any conventional round nail. The spiral thread is machine rolled onto each individual nail, which is then hardened and tempered so that it will not bend or break. The long pitch, spiral thread, which appears on the lower part of the shank only, turns the nail as it is driven, and gently penetrates both flooring and sub-floor without drastically displacing the wood fibres. The smooth upper shank, having no thread, merely turns around in place as it draws the flooring down tightly to the sub-floor and against the preceding strip, continuously holding it firmly in place.

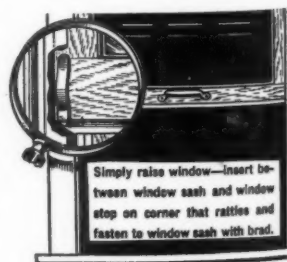
These nails hold with the tenacity of wood screws, anchor the flooring to the sub-floor; therefore, squeaky floors, cupping and buckling are eliminated. They are made in all standard sizes, while special sizes can be made to order.



SPIRAL nails cannot work out or pop up.

Stop Window Rattling

A FULL-SIZED card, consisting of five Stop-A-Rattle Anti-Window Rattlers is offered as a sample to building men by the Superior Fastener Corporation, 5224 North Clark Street, Chicago, Illinois, manufacturers of the product. It is claimed by its makers that the new item will stop window rattling, retard dust infiltration and the passage of heat and cold through loose window frames. The product is made in the form of a 2¼ inch strip of flexible stainless tempered steel. It is ¾ inch wide by 0.14 inch thick and, as illustrated, is fastened to the top of the sash with a tack ¾ inch in length.



Sun Rays Furnish Hot Water for Homes

TRAPPING heat from the sun's rays and turning it to practical use by heating water up to 204 degrees temperature for hot water heating systems is the clever feat accomplished with the aid of insulation board by a local roofing manufacturer of Miami, Florida. More than 25,000 of these systems, ranging in capacity up to 500 gallons, have already been installed and directly connected to the regular hot and cold water service lines of all types and sizes of homes and commercial buildings in the Miami area.

Known as the solar water heating system, developed by W. R. Robbins and Son, it consists roughly of two parts, one, the "heating element," and two, the storage tank. These units are connected and piped directly to the water service system of any building.

The heater is a galvanized steel case, 50 inches wide and 30 inches deep, built in any desired length to fit roofs of various sizes. This case has the bottom and four sides lined with 1/2-inch Celotex cane fiber insulation board. The insulating material lining the tank functions like a blanket wrapped around a hot water bottle. After the sun sets and the night air becomes cooler, the insulation holds the heat loss of the tank to a minimum. In addition, a special ferox treatment of the insulation prevents formation of fungi and dry rot commonly encountered in installations such as this where high moisture and hot air are always present.

The heating element fits into the tank and consists of special annealed, copper tubing upon which are soldered, in intimate contact, electrolytic copper heating fins which cover the entire floor of the case. The top of the case is covered with glass held in position by steel mullions similar to those employed in modern steel window sash.



THIS contrivance heats hot water on the roof. Installed there, it traps heat rays from the sun and raises water up to 204°. At night, insulation board which lines the 50" wide and 3" deep tank reduces heat loss to a minimum.

* * *

"Sunsulation"

IT is becoming increasingly apparent to everyone that houses will have to be planned for greater year-round comfort. Much of the money people formerly threw away on ginger bread ornament is now being utilized to pay for automatic equipment which adds to comfort and effortless living. People would rather have their houses warm or cool when they so desire than impress their neighbors with a General Grant Gothic porch. A combination of insulation and "sunsulation" such as illustrated can go far toward providing a comfortable, economically maintained house,

(Continued to page 118)

TRIMPAK

...streamlined for

LOW-COST HOMES!

Streamlined TRIMPAK
used in 98 homes like this



Price \$2,945. Builder: Brody & Sondel, Inc., Greenfield, Wisc.
Material supplied by Wilbur Lumber Co., West Allis, Wisc.

Ask for information
about "PAC-TRIM"

... the new low-priced product
with TRIMPAK quality

PAC-TRIM . . . newest product from Trimpak . . . has been created especially for homes in the \$2,500 price range.

Now . . . builders of groups of houses can get Trimpak quality at low cost!

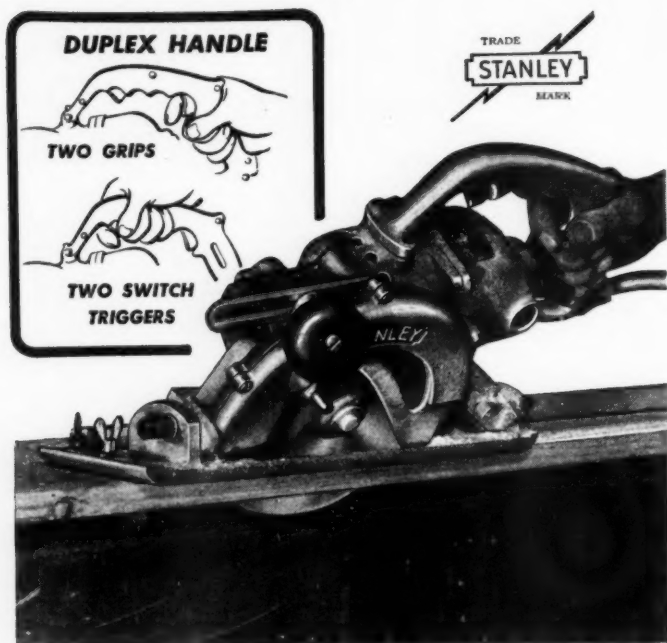
Like Trimpak, Pac-Trim is made only from the cream of the log, comes to the job clean and bright, saves labor. Pac-Trim is cut to approximate lengths, eliminating waste. It is seasoned thoroughly and uniformly. It takes and retains paint and varnish perfectly. Supplied in all woods. Also manufactured with wood or steel lock-joint, with stools and aprons returned.

Pac-Trim is *alone* in its class for low-priced homes! Write for designs, specifications and prices.

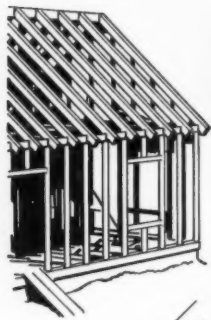
TRIMPAK CORPORATION
44 Whitehall St., New York, N. Y.

TRIMPAK

ONE HAND Drives A STANLEY Safety Saw



Stanley W8 With Exclusive Duplex Handle



IT'S BUILT TO MAKE MONEY FOR BUILDERS

USE it in the shop, to pre-cut stair stringers and other timbers that can be done inside - then take it out on the job. It handles jobs like bevel cutting for roof framing, cutting off sheathing, ripping floors and scores of other jobs easily and quickly.

The Stanley Safety Saw is built for builders, with the in-built power and ruggedness that a builder needs. The balance and the complete safety features make this an easy and safe tool to use. Ask your Stanley distributor for a demonstration, or write for literature. Stanley Electric Tool Div., The Stanley Works, 133 Elm Street, New Britain, Conn.

Stanley Safety Saws Are Made In Six Models, with Capacities From 1½ to 6".

STANLEY ELECTRIC TOOLS
"COST LESS PER YEAR"

(Continued from page 117)

according to Oscar Fisher and L. H. Meyer in their U. S. Plywood Corp. "Plywood Handbook." It has been established that the winter sun, if permitted to enter through glass on the south wall of a house, will provide an average of heat through the winter season equal to a square foot of radiation per square foot of glass. Conversely, if it is permitted to enter during the summer, it will result in a similar amount of discomfort.

A simple hood such as the one illustrated below may easily be provided on the south windows of a house. It will exclude the direct rays of the summer sun and permit the winter rays to enter and warm. If the hood is lightly constructed of Weldwood according to the critical angles shown on the drawing, it will automatically provide for such control.

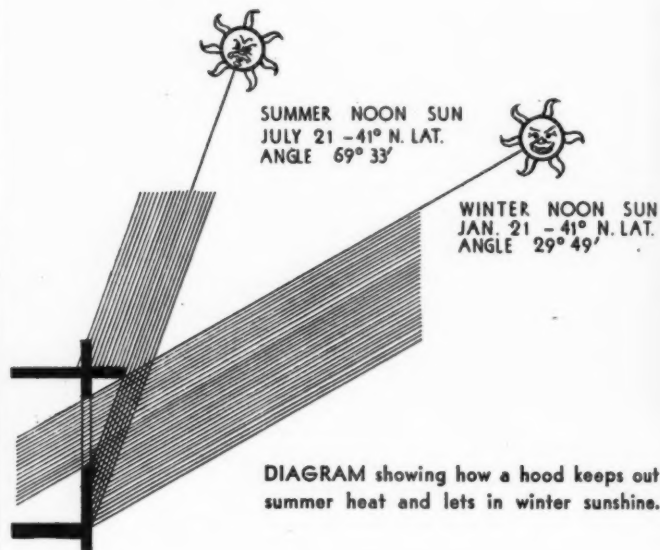
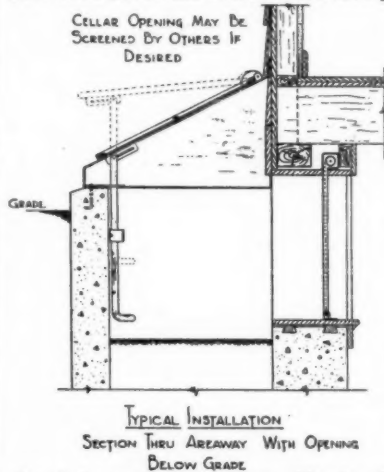


DIAGRAM showing how a hood keeps out summer heat and lets in winter sunshine.

Bilco Junior Conservatory Window

A NEW treatment for basement and cellar windows, either above or below grade, to utilize them for growing plants, has been perfected by the Bilco Manufacturing Co., New Haven, Conn. This firm offers the Bilco conservatory window for installation as

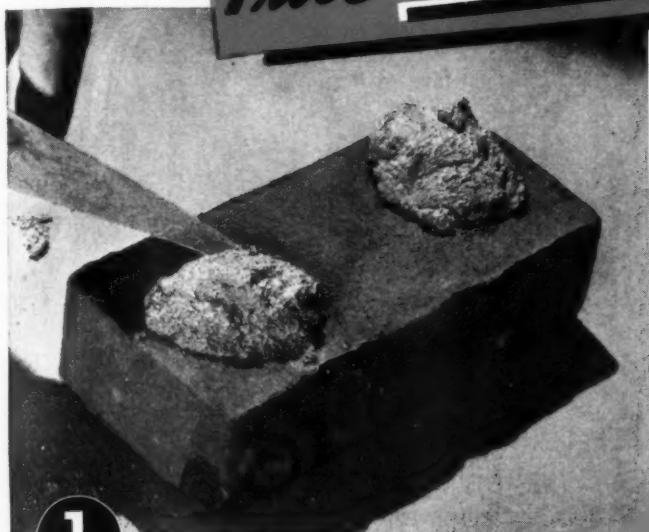


shown in the accompanying cross section detail for a cellar window with areaway below grade. The window and frame are of standard size, 3'6" by 2'6", with housing of Bethuloy copper bearing steel 1'6" high at the back where it goes against the house.

This junior conservatory comes as a complete unit with the hardware and hinges electrically welded. There is an adjusting and self-locking bar on the inside for opening the window and holding it in several positions. Header flange is provided to make a watertight joint where built into masonry wall or attached to stucco or clapboard walls. Sash side rails interlock with frame to produce a tight joint all the way around. This unit is furnished without glass, or with shatterproof glazing, and also with built-in copper roll screen included if desired.

This new home building specialty adds extra value to the home. It gives extra space outside the basement window with added light and ventilation for the basement; it provides an ideal space for flowers, bulbs, and early start of seeds for transplanting. It is easily attached to new or present structures, and conforms in appearance to almost any type of architecture. It is moderate in cost.

MAKE THIS TEST - *Prove* **BRIXMENT** is BEST!



1

Slap a small amount of Brixment mortar, and an equal amount of mortar made with lime and cement, on a brick. Wait a minute, then feel each mortar.



2

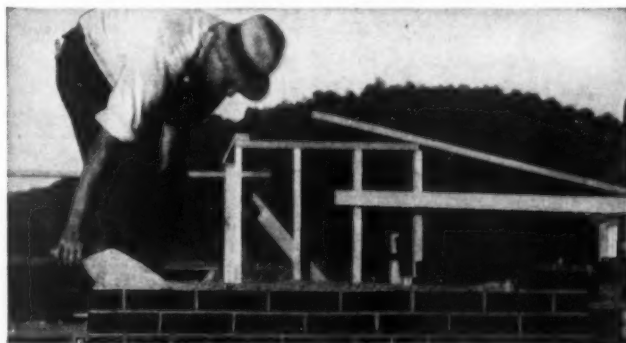
Test each mortar. You will find that the Brixment mortar stays plastic *far longer* than the other mortar. This proves *greater water-retaining capacity*.

BRIXMENT has Far Greater Water-Retaining Capacity!

WATER-RETAINING CAPACITY is the ability of a mortar to retain its moisture, and hence its plasticity, when spread out on porous brick. High water-retaining capacity is of *extreme importance* in mortar. If the mortar does not have high water-retaining capacity, it is too quickly sucked dry by the brick; the mortar stiffens too soon, the brick cannot be properly bedded, and a good bond cannot be obtained.

Brixment mortar has extremely high water-retaining capacity. It strongly resists the sucking action of the brick. Brixment mortar therefore stays smooth and plastic when spread out on the wall.

This permits a more thorough bedding of the brick, and a more complete contact between the brick and the mortar. The result is a better bond, and hence a stronger and more water-tight wall.



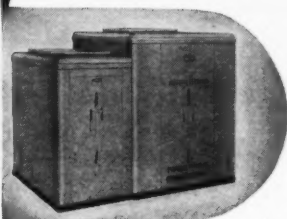
BRIXMENT

For Mortar and Stucco

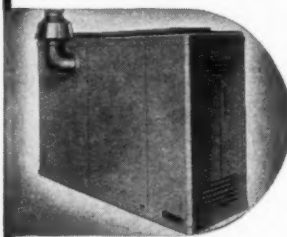
MONCRIEF

has everything you want in
WINTER AIR CONDITIONERS

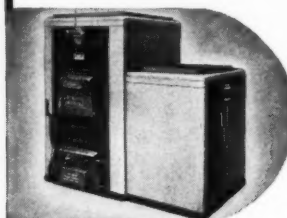
Scientifically Designed—Beautifully
Styled—Built Right—Priced Right



Aristocrat Oil Fired



Aristocrat Gas Fired



Aristocrat Coal Fired

● You will find in the extensive Moncrief line the type and size of winter air conditioner required, at a price that will command your interest. Every improvement that contributes to carefree convenience and finer comfort is included in Moncrief Winter Air Conditioners. Engineering is correct in every detail. Construction is most substantial and durable. Cabinets are smartly styled, modern.

For high efficiency, unusual economy, fine appearance, look to the complete Moncrief line.

Write for new illustrated literature and data sheets adapted to your files.

HERE'S A BIG IMPROVEMENT IN WARM AIR FURNACES



Moncrief DeLuxe Long Life Furnace

Automatic controls regulate temperatures constantly. Thermo-Drip Automatic Humidifier. Finished in handsome two-tone green enamel. Positively guaranteed for twenty years against any section burning out. Supplied with cast or steel heating unit. Truly the modern unit for the modern home.

Send for new descriptive literature

THE HENRY FURNACE & FOUNDRY CO.

3479 East 49th St. • Cleveland, Ohio

News of the Month

Building Activities and Meetings

Survey Shows Real Estate Tax Rates Affect Home Building and Buying

IN A great majority of American cities, large and small, the real estate tax rate is a very definite influence on real estate price levels and on volume of real estate sales. High taxes—and fear of higher taxes—are a very real deterrent to real estate investment. Conversely, a lightening of the tax burden, and particularly the putting of a ceiling on the real estate tax, has been reflected definitely in better tax collections, in wider home ownership and in higher real estate price levels. That is the consensus of observations made by real estate boards of the country reported to the National Association of Real Estate Boards in a questionnaire on various phases of real estate taxation, preliminary findings of which are now being tabulated by the Association.

The reports, copies of which were sent to the Association, were made initially to a governmental department, officials of which drafted the questionnaire.

The question: "Have you observed any influence of changes in the tax rates or assessed valuations on the prices of property and the turnover in property of various types?" Seventy per cent of cities replying gave a decided yes.

How Various Cities Reported

St. Louis, for example, reports: "Today, general property taxes are a greater deterrent to the sale of real estate than any other factor." Springfield, Mass., observes: "Lowered taxes have tended to make property more easily sold, and high taxes, even with low purchase price, have killed many a sale." Jersey City says: "High taxes retard building." Wichita, Kans., reports: "Upping of taxes in last assessment in exclusive residential districts is causing a trend toward suburban development." South Bend, Ind., records: "As taxes go up, prices and turnover (except for forced sales) go down, and vice versa." New Orleans notes: "Higher taxes have depressing influence on price of property and adversely affect their turnover." Des Moines adds: "Especially for investment property." Worcester, Mass., finds: "As the tax rates have increased, prices fell and turnover lessened." Lincoln, Nebr., (which reports intangibles taxed almost nil, while real estate is carrying 79.9 per cent of total government cost): "High taxes destroy value and reduce sales." Olean, N.Y., finds: "Rising taxes are most certainly stagnating the real estate market." Moorestown, N.J., finds them "particularly unfavorable in the case of farms." Parkersburg, W. Va., observes that "only the fact of a difference in tax rate as between two residential properties is sometimes a deciding factor in a sale." Portland, Ore., states: "Where levy has been increasing each year, real property is purchased for use only; there are no speculative buyers in the market."

How Reductions in Rates or Assessments Help

On the happier side of the picture, Dayton, O., states: "Reductions in either tax rate or assessments stimulate sales and increase collections." Seattle, Wash., writes: "We feel that the 40-mill over-all limit on the real estate tax in this State (on a 50 per cent valuation) has made the ownership of real estate more desirable." Bellingham, Wash., also states: "The 40-mill limit law has had a tendency to increase property turnover," and Greys Harbor, Wash., adds: "Since we have had the 40-mill limit there is a greater desire to own homes." Grand Rapids, Mich., reports: "Since we have been operating under a fifteen-mill and over-all limit on the real estate tax rate more people of limited income are purchasing homes and tax collections are much higher. We believe there is a direct relationship between the tax rate and home ownership." Flint, Mich., makes a similar statement: "As a result of the 15-mill limitation there is a definite increase in real estate activity. Assessed valuations, reduced during the depression, have been slightly raised, but not enough to offset the effects of limitation."

In 21 per cent of the cities replying there had been either no change in the tax rate or no observable relationship between tax

(Continued to page 122)

MESKER GUILDHALL CASEMENTS

appeal to Thrifty Home Buyers



Mr. J. Harry Dickman, president
of J. H. Dickman and Company,
211 E. 4th St., Cincinnati, Ohio

"Cincinnati is partial to steel casements because they appeal to Cincinnati's thrifty nature," says Mr. J. Harry Dickman, topnotch builder and president of the Home Builders Association of Greater Cincinnati.

"I like Mesker Guildhall Casements because they are permanent and solid and require so little maintenance, and with their 100% ventilation they allow my home owners to enjoy the summer breezes that we get across our hilltops."

...And Mr. J. Harry Dickman should know! He is one of Cincinnati's leading builders of fine, modern homes

and has been in the business for over thirty years.

Install Mesker Guildhall Steel Casements in the next house you build and see how quickly thrifty home buyers appreciate their many exclusive features: better ventilation, more daylight, easier to wash from the inside, easier to screen and smarter in appearance... all at a price unbelievably low.

See your nearest Mesker Dealer for complete prices on the entire Mesker Steel Window Line

MESKER GUILDHALL CASEMENTS • MESKER WICKET CASEMENTS • MESKER BASEMENT SASH • MESKER PIVOTED SASH
MESKER PROJECTED SASH • MESKER UTILITY SASH • MESKER STEEL DOORS



Please "Persnickety" Prospects ..and tight-fisted ones, too! —with Marlite



Only Marlite gives you all these "must" advantages in a single pre-finished wall material . . . gives your homes that "quality" atmosphere that pleases prospects, speeds up sales.

1. **UNLIMITED DECORATIVE SCOPE.** Over 100 colors (from pastels to full strength colors) and many patterns: plain, tile, marble and genuine wood-veneers, to choose from.
2. **EASY TO CLEAN.** Marlite's glass-smooth surface is easily kept spic and span with a damp cloth.
3. **ECONOMICAL.** Reasonable in first cost . . . saves expense of periodic renovating.
4. **ADAPTABILITY.** Suitable for a wider range of applications than any other pre-finished wall material due to variety of colors and patterns available.



5. **EASY TO INSTALL.** Large wall-size panels (4 ft. by 12 ft.) can be cut to size and applied to any surface, new or old, curved or flat, by carpenters in a few hours' time. Write for FREE colorful Booklet on Marlite Home Interiors. See our Catalog in Sweet's 11/34. Carstenite is the trade name of the raw, unfinished panels.

MARSH WALL PRODUCTS, INC.

43 MARSH PLACE • DOVER, OHIO

See Marlite Exhibit at New York World's Fair, Building Materials Building

Marlite
FOR CREATING BEAUTIFUL INTERIORS
WALL-SIZE PANELS IN LUSTROUS COLORS AND PATTERNS

NEWS—

(Continued from page 120)

situation and market situation. In 9 per cent of the cities the influence of the tax situation on market activity or prices, while observable, was felt to be relatively slight.

Atlanta, Ga., points out that the tendency toward increased taxation is probably a greater deterrent to purchasers than is the tax actually levied. Reported by various cities: large numbers of people finding locations outside of the corporate limits because of constant increase in tax rate.

March Residential Contracts

About Same As Year Ago

RESIDENTIAL contract awards in 37 eastern states, as reported by F. W. Dodge for the period Mar. 1-22, amounted to \$79,904,000 as compared to \$82,421,000 for the same period in 1939. The first two weeks of March registered a 17 per cent increase but the third week cut down the gain.

Statistics for the four classes of construction are as follows:	37 Eastern States	Mar. 1-22, '40	Mar. 1-22, '39	Feb. 1940
Residential	\$ 79,904,000	\$ 82,421,000	\$ 74,858,000	
Non-Residential	51,780,000	64,648,000	70,565,000	
Public Works.....	46,368,000	41,440,000	42,929,000	
Utilities	14,099,000	13,121,000	12,222,000	
Total	\$192,151,000	\$201,630,000	\$200,574,000	

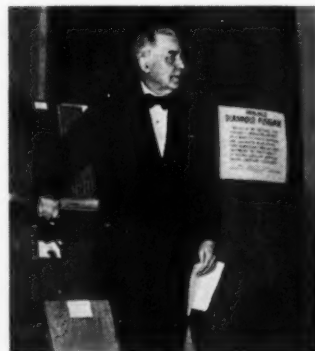
New Triple-Duty Building Material

THE Insulite Co., Minneapolis, Minn., has announced the creation of a triple-duty building material that serves as a plaster base, a rigid insulating material, and a barrier against vapor travel into stud spaces. The new product, known as Sealed Graylite Lok-Joint Lath, is integrally waterproofed with asphalt, comes in 18 by 48 inch panels in three thicknesses, and has shiplap joints to provide a maximum of efficiency in insulation and vapor control.

Plywoods and Laminated Plastics Discussed

A TECHNICAL meeting, sponsored by the Bakelite Corporation, was held at The Franklin Institute in Philadelphia, Tuesday evening, March 12, the subject being "New Bakelite Resin Developments in Laminated Plastics, Plywoods and Veneers." Three hundred eighty-five invited guests were present.

George R. Meyercord, president of the Haskellite Manufactur-



GEORGE R. MEYERCORD



D. J. O'CONOR

ing Corporation, spoke on "Improved Bakelite Resin-Bonded Wood Structures." He described how plywood had been faced with metal to give it greater strength and how a thin sheet of asbestos was inclosed within the panel for greater fire protection. Mr. Meyercord also told of the development of the Fairchild Duramold plywood airplane that was designed by Colonel V. E. Clark.

D. J. O'Connor, president of Formica Insulation Company, spoke on "New Developments in Laminated Plastics." He discussed the acceptance of laminated material by furniture designers and architects and its use for panels and table tops in the library of Congress and on the new Cunard liners—the Queen Mary and the Queen Elizabeth.

SHOW Wants

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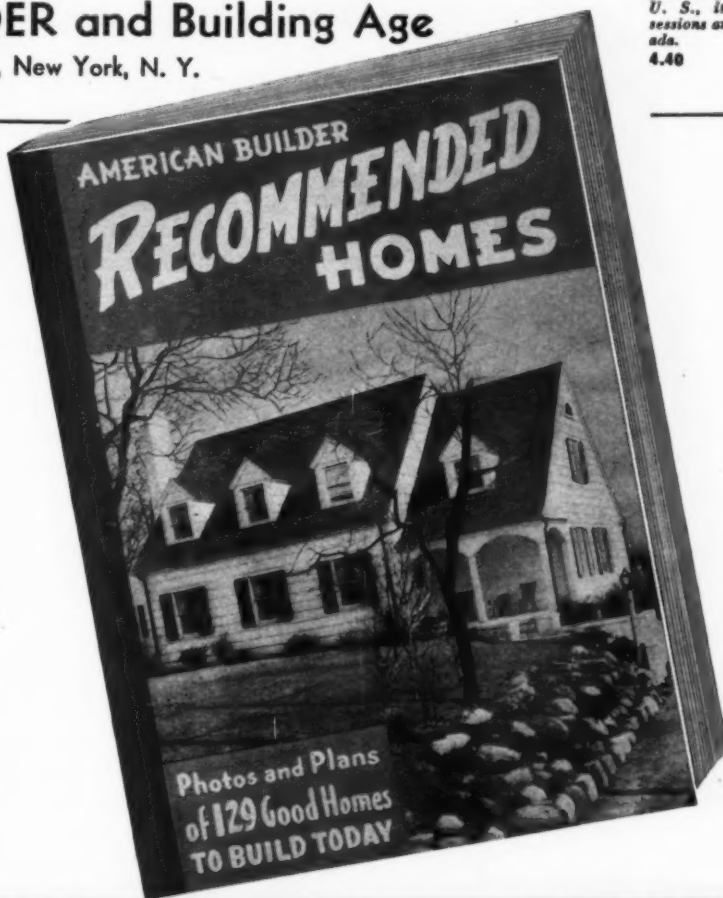
A copy of Recommended Homes will be sent absolutely free, with any paid in advance subscription or renewal for American Builder, accompanied by \$2.00 for one year, \$3.00 for two years or \$4.00 for three years.

This Book May Be Worth Hundreds Of

Dollars To You—It Contains 180 Pages

Packed With Practical *Salable* Ideas And

Shows 129 New Homes and Floor Plans



OUR NEW SPRING PLAN BOOK—Just Off The Press

Here are a few of the many features which will make Recommended Homes a valuable reference book now and for many months to come.

There are the 15 New York World's Fair houses in "The Town of Tomorrow" . . . the House of Vistas . . . the Double Duty House . . . Triple Insulated Long Island Colonial . . . Traditional New England Homes . . . Tomorrow's Garden House . . . Celotex Modified Classic Homes . . . compact 5-room Southern Home built at Atlanta . . . 5-room cement Shingle cottage in Muskegon, Mich. . . five popular model homes in Detroit's "Duchess Project" . . . a cozy bride's home in the Cape Cod manner at Northwood Park, Baltimore . . . and many other "best sellers".

Many examples of the ultra-modern all electric home—homes of the functional type—built to sell and not for show. These include a Houston prize winner . . . Monterey Style Home in Elkins Park, Pa. . . all electric home in Detroit with many new features . . . homes in Cedar Rapids, St. Paul, Philadelphia . . .

and selected homes which have won prizes in G-E and AGA Home Competitions.

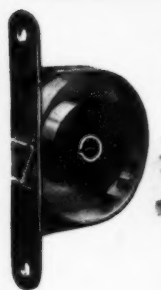
In some localities the all gas home is preferred, and Recommended Homes recognizes this preference with examples of the finest and most practical, such as . . . the Portland, Ore., "House in The Woods" . . . a 6-room cottage in San Gabriel Village development, Los Angeles . . . a fine Dutch Colonial in Columbus, Ohio . . . a New England Colonial Prize Winner in White Plains . . . a Miami "Moderne" transplanted to Billings, Mont.

You certainly will find valuable the pages devoted to quickly figuring the amounts of payments on FHA loans. Also there is a lot of practical information on technical details such as a chapter on Textures and Coursing for the surfaces of Concrete Walls . . . a chapter on "Mirrored Doors, how to use them to advantage in the home" . . . a chapter on Outdoor Grilles and Barbecue Fireplaces . . . and many other pages devoted to helpful ideas and suggestions.

AMERICAN BUILDER
and Building Age

The World's Greatest Building Paper
30 Church Street, New York, N. Y.

Pullman UNIT SASH BALANCES



EASY TO INSTALL

TYPES: Pullman Sash Balances can be obtained in both side and overhead types—14 in all, including sizes for the smallest window up to the largest. Overhead Type Balances make narrow mullions and maximum light area possible.

ADJUSTABLE FEATURE: Pullman Sash Balances can be obtained with or without adjustable feature. Spring tension in the adjustable type can be changed with an ordinary screw driver. No other sash balance has this feature.

FINISHES: All exposed surfaces Electro-Galvanized Zinc Coated. Can be furnished with solid brass or bronze face plates and with electro-plated brass, bronze, nickel, copper, or chromium face plates at a small additional cost.

GUARANTEED for life of building. Dummy Balances furnished FREE of charge for mortising purposes.

MORE ECONOMICAL Than Weights and Cords

Pullman Sash Balances are installed in 10 to 15 minutes per window as compared to 30 to 45 minutes or more with weights and cords. Sash are grooved in one operation instead of two. No pulleys, cords, weights or weight pockets to bother with. Expensive box frames are eliminated and less lumber is required.

Pullman Sash Balances assure perfect window control—easy and quiet operation. They are entirely encased of pressed steel construction—light in weight and non-breakable. No leakage of cold air as with pulley installations. Saves the home owner's coal bill.



Showing
Assembly
of Adjustable
Type Sash
Balance

Write
TODAY

PULLMAN MFG. CORPORATION

Established 1886

A Half Century of Progress

1180 University Ave.,

Rochester, N. Y.

Curtis Engineer Honored

SERN MADSEN, engineer and research director of Curtis Companies Incorporated, Clinton, Iowa, manufacturers of Curtis Woodwork, was one of a group of "Modern Pioneers" named by the National Association of Manufacturers at a banquet and program held recently in Chicago. The program, industry's observance of the 150th anniversary of the founding of the American patent system, honored those persons whom they believed had enhanced living standards and created employment through their patented discoveries and inventions during the last 25 years.

Mr. Madsen was nominated and selected as a modern pioneer for his many contributions to the woodwork and building industry. During his many years of service with Curtis Companies Incorporated, he has received 69 patents and has 15 more pending. One of his outstanding achievements was the development of the Curtis Silentite Pre-Fit Window Unit—the first basic improvement in double-hung window construction in nearly three hundred years. He has also developed the Curtis Silentite Casement Unit—Mittertite Trim—and numerous other products and machines which have greatly improved modern woodwork and modern homes.



SERN MADSEN

New Plant for Concrete Building Units

A NEW plant for the large-scale production of prefabricated concrete building units by new principles of manufacture is being built in Pittsburgh by The Cemenstone Company. L. M. Johnston, president of the company, states that the wide acceptance of Cemenstone products has necessitated removal to a location which will permit acreage for necessary expansion. The company also has formed its own sales organization.

New buildings are to be erected and equipped with the company's patented machinery, which employs vibration, heat and rapid cycles of manufacture to produce building shapes of more uniform appearance and of greater weatherability and strength.

Blocks for wall structures, lintels, used for wall structure supports over doors and windows, and slabs for floor and roof construction are the first products of the new plant, but the company plans to expand its operations to include the manufacture of every type of building element where concrete can provide superior and more economical construction.

The company has patents registered in the United States and foreign countries which cover the process of manufacture, machinery, and the design of the products.

Chicago Home Show Announced

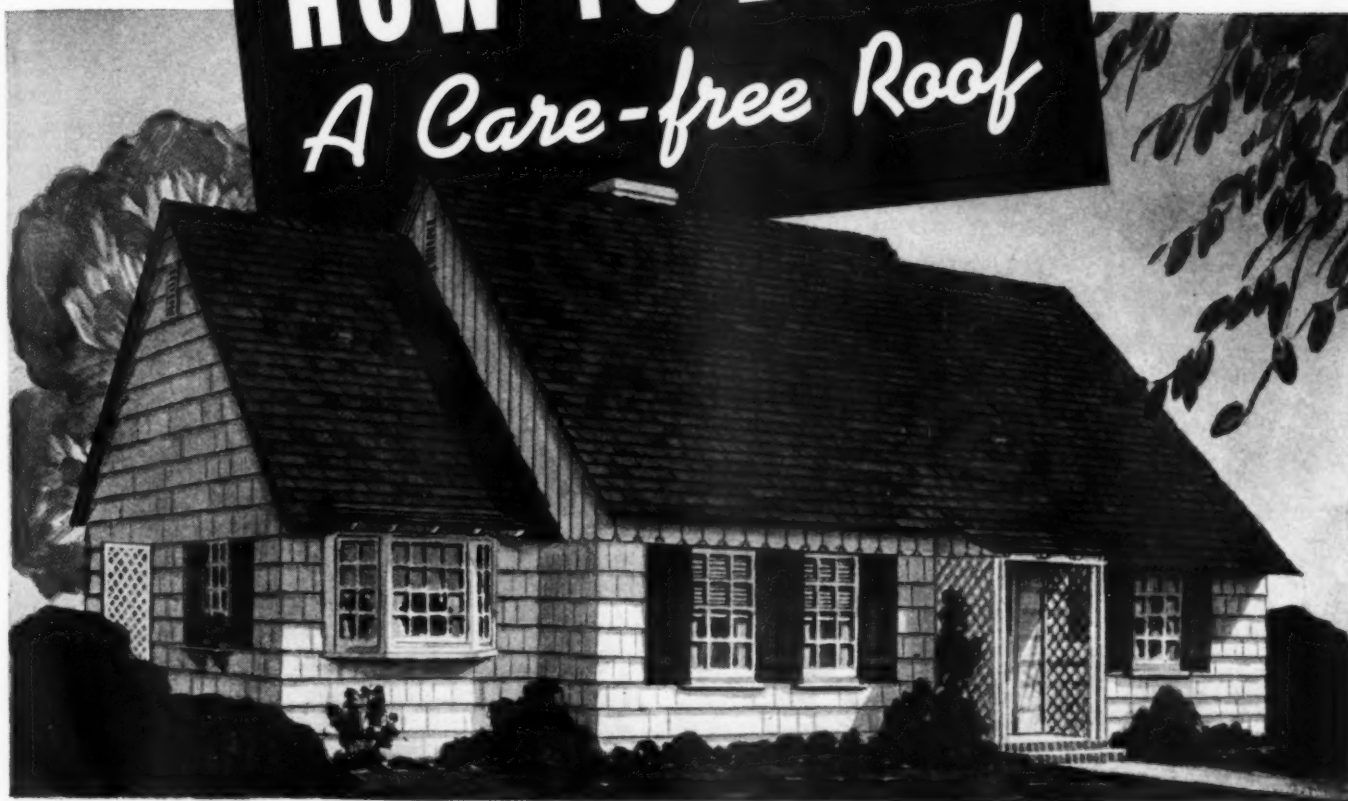
THE National House and Garden Exposition of interest to the entire home building industry in the Middle West will be held this year at the Coliseum in Chicago from May 4 to 12, inclusive, with more elaborate and varied exhibits than ever before presented.

John A. Servas, founder and managing director of the Exposition, whose headquarters are at 228 N. La Salle Street, Chicago, has reported that display space is being taken by prospective exhibitors in view of the program now being planned to attract the crowds.

NEWS BRIEFS—

THE United States Savings and Loan League will hold its 48th Annual Convention in Chicago Nov. 13 to 15; this will be the sixth time that the organization has met in Chicago since it was founded there in 1892, and as the first meeting in the '40's, this convention will take stock of what the decade of the '30's did to and for the association business. . . . **MONARCH** Metal Weatherstrip Corp., St. Louis, Mo., has announced the election of John A. Goellner as president. . . . A new type of shingle stain which holds color longer without bleeding or running and at the same time protects the shingle itself against rot, warping and curling has been announced by **PROTECTION** Products Mfg. Co., Kalamazoo, Mich. Greatly improved appearance due to color fastness is claimed.

HOW TO BUILD *A Care-free Roof*



Whether You Contract to Build Or Build to Sell

GENUINE RED CEDAR SHINGLES *Will Never Let You Down*

Hundreds of thousands of new Cedar Shingle roofs built during the last few years are testimony indeed to the confidence of the builder and home owner in the amazing qualities of genuine Cedar Shingles. Made better than ever before under the Certigrade Official Inspection Label, you can use them for roof and side-walls with perfect confidence coupled with high-class appearance.



The Certigrade Handbook

Prepared by a wood technologist, mailed free on request. One hundred pages detailing the uses, application, and technical data. Write the Red Cedar Shingle Bureau, Seattle, Wash., U. S. A., or Vancouver, B. C., Canada.

FOR GUARANTEED GRADES AND QUALITY, SPECIFY—

CERTIGRADE *Red Cedar* Shingles

Certigrades pass official inspection for grade and quality.



Sold only by established lumber dealers.

CUSTOMER-ATTRACTING CEILINGS mean more business for grocers. The decorative ceiling treatment in the Streamline Market, Columbus, Ohio, was achieved by combining 32" x 32" panels of cream Temlok De Luxe with a border of green. Temlok Dealer: McNally Lumber Company.



✓ CEILING PROBLEM SOLVED

... Insulation, Attractiveness, and Quiet achieved at low cost with TEMLOK DE LUXE

THERE'S a profit-tip for you in this colorful grocery store ceiling—a typical example of the wide market which exists for Armstrong's Temlok De Luxe.

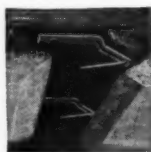
This versatile wall and ceiling material is easy to sell in all types of buildings—commercial and residential—because it offers customers everything they want in an interior finish. It *insulates*—saves fuel and adds to year-round room comfort; it *decorates*—comes in five attractive colors and in panels, planks, and boards, for distinctive walls and ceilings; *quiets noise*—a big sales feature for commercial installations.

Also, Temlok De Luxe is made by the makers of Armstrong's Linoleum, nationally known for high quality building products. Why not try Temlok De Luxe on your next interior job? Near-by stocks assure you prompt delivery. Write for complete information and samples to Armstrong Cork Company, Building Materials Division, 979 Concord Street, Lancaster, Pennsylvania.



NEW TEMLOK INSTALLATION METHOD GIVES QUICKER, STRONGER RESULTS

New metal devices—Armstrong's TEM-CLIPS—provide a permanent, invisible support which "floats" individual panels or planks against furring strips on walls and ceilings. They allow normal movement of the base without disturbing the Temlok De Luxe. For a faster, more efficient installation, use Armstrong's Tem-Clips on your next project.



Armstrong's TEMLOK INSULATION

DE LUXE INTERIOR FINISHES

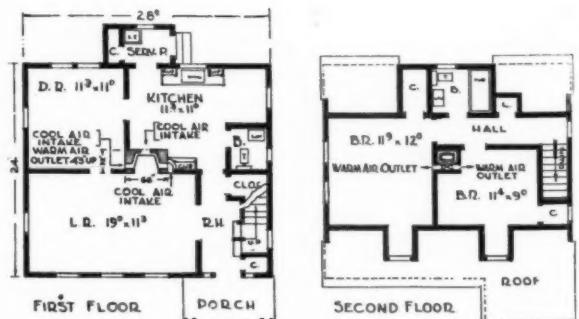
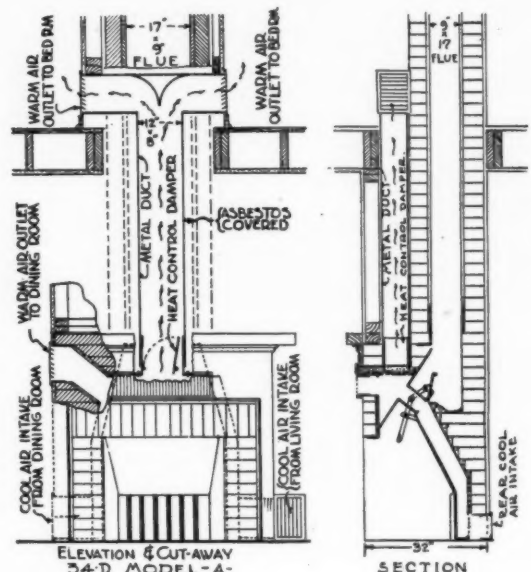
TEMSEAL SHEATHING - LATH - ARMSTRONG'S MONOWALL

Cheerful But Inexpensive Small Home Heating

SMALL homes in mild climates are being very satisfactorily heated by the living room fireplace equipped with a "Superior Fireplace Circulator," according to testimonials and evidence attractively presented with photographs and diagrams in a new 32-page portfolio of fireplace designs issued by the Superior Fireplace Company, 1046 S. Olive St., Los Angeles. The arrangement for heating a small two-story house with two bedrooms upstairs is illustrated below. Note that the centrally located fireplace in the living room pulls in cool air from both living room and kitchen, and after passing it over the hot metal backplate of the fireplace, conducts it up through a metal flue to the two rooms above. There is also a warm air outlet to the dining room, assuring its warmth. The living room itself is heated directly from the fireplace by radiant heat, while the kitchen range naturally takes care of that part of the layout.

This improved fireplace equipment makes of the fireplace a practical heating plant, and not merely an ornamental living room feature.

In the Superior fireplace line are models adapted to practically any condition of design, room layout, etc. Warm air circulation to supplement the customary radiant heat action has fully demonstrated itself and is proving very popular in vacation cottages and in small homes throughout the country.



TYPICAL small home layout with details of central heating by "Superior Fireplace Circulator."

* * *

AIA Convention Set for May 21

HUNDREDS of architects, industrialists, and educators will assemble in Louisville, Ky., on May 21 to participate in the seventy-second national convention of the American Institute of Architects. Housing, city planning, and other national problems will be discussed in sessions lasting four days. The Producers' Council will convene concurrently with the Institute.



Every one of ninety-five apartments in Kimbrough Towers, Memphis, Tennessee, has an easy-cleaning floor of Armstrong's Linoleum in kitchen, bath, and breakfast room. The bathroom walls are covered with Armstrong's Linowall.

95 HOME SWEET HOMES

... thanks to easy-cleaning kitchens, baths, and breakfast rooms

NOT one of the ninety-five lucky families that live in this modern apartment is going to do any worrying about the floors in the kitchen, bath, or breakfast room. That's because Armstrong's Linoleum is on the job in each of these areas. Ninety-five housewives—and maids—will find it easy to keep this linoleum clean and bright. For there's little work involved in the simple dusting, occasional washing and waxing, that these floors require.

And the master-of-the-house won't have to reach into his pocket or bicker with the landlord about

expensive floor refinishing. That just isn't necessary with Armstrong's Linoleum. The colors run right through the material—so they won't scuff or wear off.

Any architect or builder is making a wise move by installing floors of Armstrong's Linoleum.

There are over 200 colors and patterns available, so it is easy for you to create smart floors. For full information, see *Sweet's* or write for file-sized literature. Armstrong Cork Company, Building Materials Division, 1218 State Street, Lancaster, Pa.



ARMSTRONG'S FLOORS LINOLEUM

Rubber Tile - Linotile (Oil-Bonded) - Asphalt Tile - Cork Tile - Linowall Wall Covering

A Tremendous RESPONSE



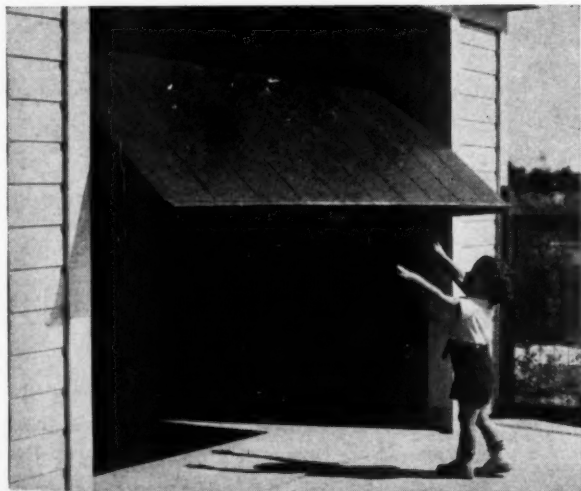
CARL A. STRAND

Greets the New Strand Door

And no wonder when you consider its SENSATIONAL LOW PRICE, its remarkable simplicity and its amazingly easy operation.

Are You Sharing In This Landslide Of Profits?

If not, get in now and specialize on this outstanding, low-priced door that makes swinging garage doors as obsolete as the horse-and-buggy! Made of laminated hot-plate resin-bonded plywood, guaranteed by the manufacturer not to separate. Light-weight, rugged, one-piece type, perfectly balanced. A child can operate it with a finger-touch. Simple, fool-proof mechanism. Only two moving parts. No weights, tracks or pulleys. SHIPPED KNOCKED-DOWN. INSTALLED IN ONE HOUR. Tap this great market. Inquire today.



STRAND DOOR

ONE-PIECE OVERHEAD TYPE

ASK YOUR DEALER or MAIL COUPON

STRAND BUILDING PRODUCTS CO.,
452 So. Woodward, Birmingham, Mich.

AB 4-40

Send me free folder and full details.

Name.....

Address.....

☐ Contractor

☐ Dealer



Builders Tell the World

(Continued from page 61)

the mass home market. An entirely different atmosphere is maintained in the Sutton Park sign and entrance detail illustrated. Here an atmosphere of dignity and restraint is achieved, appealing to persons interested in the more expensive type of country home.

Builders who resolve to consult a local sign specialist to enliven their sales approach should first consider whether they have a name or a theme worth advertising. A few of the popular Long Island developments bear the following names: Saddle Rock Estates, New Salem, Flower Hill, Kew Gardens, Insured Homes, Parkway Community Homes, Norgate, Willow Manor, Chester Hill, Sussex Homes, Forest Hills, Sutton Park, Shore Haven, Garden City, Green Park Acres, Hillside Heights, Alden Terrace.

Street names, too, are important. In Levitt's Strathmore-Vanderbilt Country Club development, street names have been selected with particular care to reflect the appeal of the neighborhood. Included are such alluring phrases as Payne-Whitney Lane, Castle Ridge Road, Sherry Hill Lane, Mill Spring Road, Country Club Drive, Fairway Lane, Flower Lane, Garden Turn, Mountain Cut Road, Soundview Crest, Timber Lane.



Build with FIR-TEX and you build Profits

1 INTERIOR FINISH 1... 5 Striking Tints

Fir-Tex insulating color panels are the ideal material for special rooms . . . in attics, it insulates as it builds . . . in basement recreation rooms, it beautifies, soundproofs and insulates . . . in library and music rooms, it stops reverberation. These Fir-Tex panels come in five popular pastel shades—Ivrykote, Wheatkote, Greenkote, Blukote, and Aprikote. The Colors are baked on, for permanence. The surface is glazed; doesn't attract dust or cobwebs. Fir-Tex is *twins*—it builds as it insulates.

The consumer acceptance for Fir-Tex, built up with a quality product and with consumer advertising, helps smooth the way for sales. See the full-page, full-color advertisement in the May *American Home* (circulation 1,750,000).

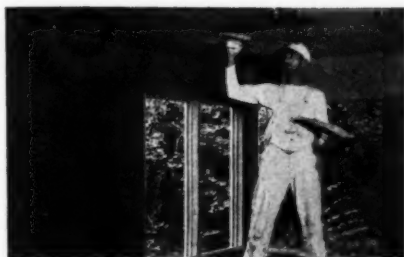
(Right) A typical attic room finished in Fir-Tex insulating color panels. . . Ceiling is of Ivrykote and walls are of Wheatkote.



2 FOR STRUCTURAL USE . . . A Full Line of Boards

Plaster Base Lath

One installation cost; builds as it insulates. Insulates completely—eave to eave and floor to ceiling. Better, cheaper than lath-plus-insulation. . . . Fir-Tex Insulating Plaster Base Lath has a stronger bond, eliminates plaster wastage between lath, reduces plaster cracks to a minimum, eliminates unsightly lath mark on ceilings. Builders from coast to coast are using Fir-Tex Insulating Plaster Base Lath for *super* jobs at minimum costs.



Sheathing

Use on all side walls and on pitched roofs. On side walls, Fir-Tex sheathing takes the place of ordinary sheathing and building paper and *adds* insulation. It provides protection from wind, dust, cold, heat, noise. Has greater bracing strength than wood sheathing. On pitched roofs, Fir-Tex sheathing insulates where the greatest heat loss occurs; adds materially to the structural strength of the building, and provides a permanent moisture barrier.



FIR-TEX

INSULATING BUILDING BOARD

SEND FOR CATALOG AND SAMPLES

Free . . . 1940 edition of Fir-Tex catalog, featuring new, improved products . . . also sample boards, to enable you to see yourself the many advantages of this product. Mail to—

FIR-TEX,
Porter Building, Portland, Oregon.

Name _____

Address _____

AB-A40



Here is an idea that will make your houses easier to sell or rent. Use clever inset designs in Linowall—the linoleum-like wall covering that is truly washable. Write now for other interesting wall covering suggestions.



BOOST BUSINESS WITH SALES-WINNING WALLS

ONE sure way to speed sales and rentals is to dress up interiors with colorful walls of Armstrong's Linowall. This permanent, linoleum-like wall covering will bring new life to old rooms and add real sales-appeal to your new houses.

Women are delighted with the many pleasing features of Linowall. The colors and patterns go with any decorative scheme. And the fact that Linowall can be washed just as easily as linoleum always makes a big hit. Linowall is permanent, durable—it won't crack, craze, or crumble on moderately settling walls, and the rich colors can't wear off.

With all its advantages, Linowall will save you money. It costs only about half as much as other permanent materials. Furthermore, when you tell customers that Linowall is made by the makers of Armstrong's Linoleum, you have another strong sales-clincher. Get the whole story. Write today for your copy of a free, color-illustrated booklet, *Decorative Walls of Enduring Beauty*. Armstrong Cork Company, Building Materials Division, 1218 State Street, Lancaster, Pennsylvania.



Armstrong's LINOWALL

Made by the makers of Armstrong's Linoleum



GLASS blocks, modern wall paper and colorful linoleum contribute to sales appeal of this Independence Homes kitchen.

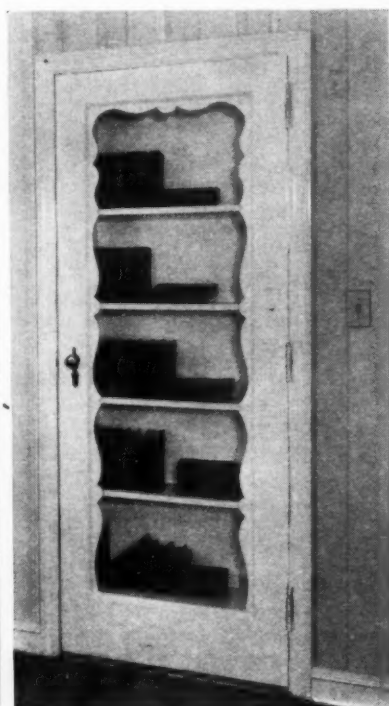
Buyers Respond

(Continued from page 63)

lights in bathrooms for shaving, are no longer unusual in ready-built homes. Built-in bars with auxiliary kitchenettes including sink and gas plate are provided in pine paneled basement recreation rooms, even in homes that sell for less than \$5,000.

Electric door chimes of one type or another have displaced the old fire-alarm doorbell, while Gross-Morton are including electric clocks in kitchens that have the door chimes enclosed within them. Electric ventilating fans in kitchens are appearing more and more often, while efficient insulated console gas and electric ranges are as permanent in standard kitchen equipment as the inlaid linoleum on the floor, the tile or linoleum drain boards, and built-in cabinets and cupboards. Builders frequently feature an all-electric kitchen including among other things, a dish-washer and garbage disposer for the sink drain.

Any builder will bet his hat that more electric equip-



DISAPPEARING door in this Gibson built home designed by Arthur Allen leads to extra second floor rooms. Attractive bookcase front makes space do double duty.





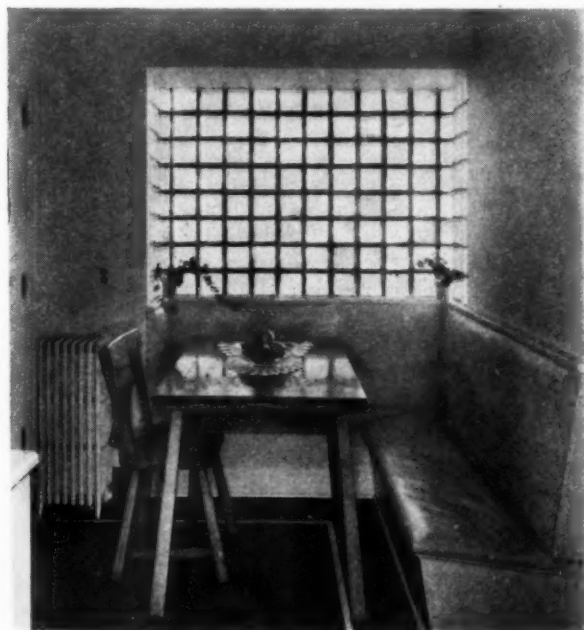
GLASS shelves in front of glass blocks hold ivy plants in this Long Island breakfast nook with built-in seats. No wonder the girl next door drops in for a cup of coffee.

ment will be demanded as electric rates are adjusted further into the realm of practicability. The widely favored over-head garage door will be operated electrically, or perhaps by radio from the automobile dashboard—a device that already is on the market. Nursery rooms will be equipped with time switches to allow the light to go out automatically when the baby is asleep—another invention already available.

No builder need be frightened by this stampede for special equipment. Houses are built to be lived in, so why not sell them ready to be lived in? The modern builder is selling more than shelter. He is a creator of solid comfort. He should ask himself:

"Does my house have oomph?"

Then rely on the sophistication of the American public, which does not expect to get something for nothing.



NICELY upholstered leather seat lends charm to this Mott Bros. breakfast nook. This panel of glass block gives it a bright and cheerful air.



That's the kind
of bathroom
I like!



• The lady is pleased. . . And why not? Every woman wants a modern bathroom, with modern fixtures.

And Formed Iron Plumbing Ware is fast becoming the American family favorite; it is *fine* ware at moderate cost. Try it with the next home you build. See how its faultless styling and attractive color combinations make a bathroom a thing of beauty.

And remember — this Formed Iron Plumbing Ware is *acid-resisting* at no extra cost. It is *formed* from ARMCO Ingot Iron — your assurance of the highest basic quality. Every piece is entitled to carry the famous ARMCO label. Point out this familiar trademark to your prospects and they'll know you install only top-quality fixtures.

ARMCO
INGOT IRON

A NAME KNOWN TO MILLIONS

• *Hot-water Hint:* The newest thing in hot-water tanks is one that's porcelain enameled inside and out on ARMCO Ingot Iron. No more leaks and rusty water. Write for details. The American Rolling Mill Company, 1111 Curtis Street, Middletown, Ohio.



3 WAYS TO MAKE MONEY



1. FLOOR SURFACING

Be your own boss and make big money with an American Floor Sanding Machine. As much as \$25.00 a day is not an unusual amount for the floor surfacing contractor to make. When "New Building" activity is slow, there are always hundreds of floors in older homes to be resurfaced and finished.

With the many outstanding time and money-saving features, American machines for years have been the favorites of floor surfacing men. Investigate the wonderful possibilities of this work today.

2. POLISHING and WAXING

Many contractors find a considerable need for polishing, waxing, steel-wooling and disc-sanding equipment. Here it is—all in one—in the new American DeLuxe line. In addition—many men are doing nothing but polishing, waxing and finishing floors and making big profits at it too. There is a big field for men owning these machines. Decide to be your own boss and investigate today.



3. CABINET and MILLWORK

Here is a machine—the American Sanderplane that will quickly pay for itself in your work. Many lumber companies, millworks and cabinet shops have testified as to the American Sanderplane's money-saving and profit-making applications. Besides wood, it can be used on metal, marble and stone with equal success.



SEND COUPON NOW

If you are at all interested in getting into something for yourself and getting out of the "old rut" or if you want to increase your profits in your present business, sign and send in the coupon below. There is no cost or obligation to you. Be sure to check the kind of machine you are most interested in on the coupon below.

THE AMERICAN

FLOOR SURFACING MACHINE COMPANY

511 So. St. Clair Street • Toledo, Ohio

Gentlemen:

Without cost or obligation send complete prices on the following:

- ☐ American Floor Surfacing Machines
- ☐ American Polishing and Waxing Machines
- ☐ American Belt Sanders
- ☐ I want to get into something for myself
- ☐ I already own one, quote trade-in value

Name _____

Street _____

City _____

State _____



THOMAS GRACE, state FHA Director, congratulates officers of Green Park Estates at the opening of new model home World's Fair Trylon against the background of the view.

FHA and the FACTS

(Continued from page 64)

Square National Bank, and others led the way. Today such banks as these are selling their mortgages as fast as they make them to the larger institutions, and not only getting a premium for them but making a pretty penny for themselves by servicing the paper for their customers.

When "Tommy" Grace is not busy dedicating new home building developments, making speeches, or cutting the red tape of some knotty financial problem, he is glad to talk about Long Island builders. "The old suspicion that attached to speculative building enterprises has been successfully eliminated," he told *American Builder*. "Home seekers today realize that the property standards and minimum requirements set up by the FHA for its own protection automatically protect them too. As a result buying has kept steady pace.

"The housing program owes much of its success to the fine work of operative builders," he said. "Without them I doubt if we would have advanced as we have. It is their volume production which has resulted in home owners getting more for their money today than ever before and in keeping the price range within the reach of the elements in our population that the FHA is most anxious to put into their own homes."

He pointed out that there has been a notable trend on Long Island toward lower cost houses. Recent new developments in connection with the low-cost \$2,500 class house with 5 per cent down payment make him believe that there will be a great expansion in this field. "I can say without reservation that hundreds of builders on Long Island are prepared to go ahead with such a program," he said. "And the Long Island banks stand ready to finance it."

Grace believes that the future for Long Island is exceedingly bright. As he put it, "It has the wooded country, seashore, lakes and hills that are natural territory for home lovers—and each year improvements in transportation facilities bring them nearer and nearer to the heart of New York City." Describing the character of the 20,000 new homes that have come into existence on Long Island under FHA, he said:

"These are not houses stuck up in rows or laid out in

a haphazard manner. In authorizing their construction the Federal Housing Administration has not only insisted on due regard for neighborhood harmony and architectural attractiveness but has land-planned them and landscaped them until today they are the real beauty spots of Long Island. Under the direction of Mr. Seward Mott the Land Planning Division of the FHA has done a truly magnificent job in Queens and Nassau counties, and it has been done without any loss of land space or of any of the utilitarian features that should accompany a modern home.

"A great many factors have contributed toward the remarkable building development on Long Island, but outstanding among these I believe is the policy of Administrator Stewart McDonald to lessen the burdens of home owning wherever possible. Nowhere else in the country has such instant advantage been taken of each move made in this direction. When experience convinced Mr. McDonald that a 90 per cent mortgage with a 25-year amortization period was feasible for properties up to \$6,000 in value, he immediately went to Congress and asked authority to put such a system into effect.

Real Aid to Home Buying

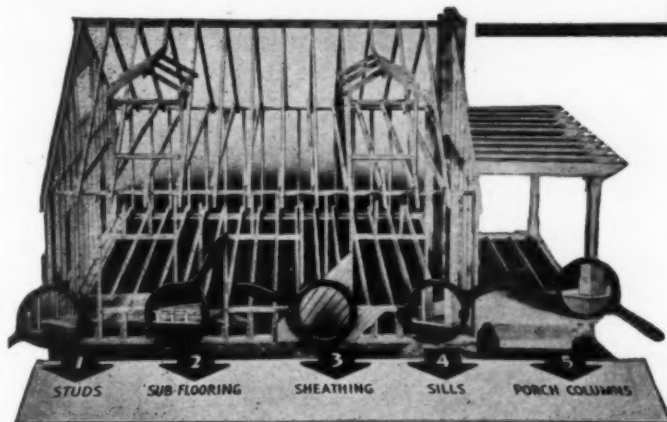
"The impetus given residential construction by this shrewd move is too well known to require extended comment here. When the condition of our Mutual Mortgage Insurance Fund justified placing the mortgagor's premium on decreasing balances it was done. At the same time the old service charge allowed mortgagees was eliminated and later on the maximum interest rate was cut from 5 to 4½ per cent.



SCENIC beauty, such as seen in this view of a street in New Salem development at Port Washington, is becoming the rule rather than the exception in Long Island developments—one of the direct results of FHA land planning activity.

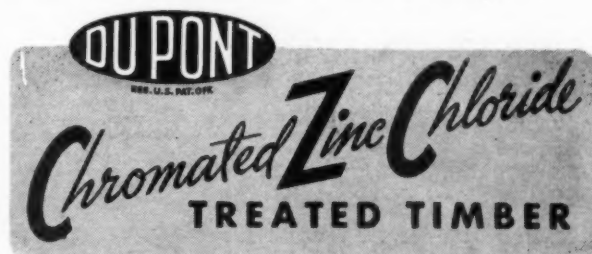
"So sound is the Long Island building program regarded by financial institutions today that many of them are making mortgage advances at 4¼ per cent, and a number have entirely waived the ordinary charges such as legal fees, title search, registration fees, etc., which in many cases totalled as high as \$200. To this liberal policy Long Island reacted promptly. The Administrator has pledged himself to its continuance so the movement east on Long Island should go on undisturbed. Nassau County is now running neck and neck with Queens, and with the development of the low-cost housing program Suffolk County should speedily fit itself into the picture in a big way."

BE SURE TO *Specify* THIS IMPORTANT SAFEGUARD IN BUILDING



Vulnerable sections of a building near the ground and foundations are subject to damage from decay and termites.


Protect the home-owners' investment against unnecessary maintenance costs by using:



• DU PONT Chromated Zinc Chloride makes lumber more resistant to decay than any other "clean" treatment. It is also repellent to termites, fire retarding, clean, odorless and paintable.

Lumber preserved with DU PONT Chromated Zinc Chloride protects wood construction for more than the normal life of the investment, outlasting untreated lumber from 3 to 10 times.

Don't miss this opportunity to add more durability to your buildings. Write us today for your copy of "Stop Decay and Termite Damage", and names of suppliers of this treated wood.

E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
GRASSELLI CHEMICALS DEPARTMENT
WILMINGTON  DELAWARE

IT PAYS TO RECOMMEND



Many a contract, many a property transfer and many a rental is affected by the convenience and efficiency of Frantz "Over-The-Top" Equipment. Day after day, year after year, this trouble-free equipment will testify to your good judgment and prove a powerful leverage on new business. If you're not familiar with the 1940 model, by all means get acquainted at once . . . write for complete information.

FRANTZ MANUFACTURING CO.
Sterling, Ill.

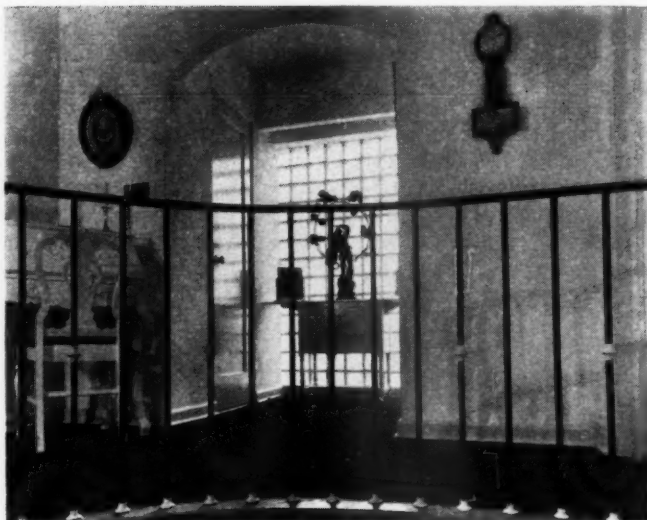
LOOK

At These FEATURES

Equipped with Automatic Openers.
Usable on old or new doors.
Friction brake prevents slamming.
Only 2 1/4 inches headroom required.
Adjustable to various weights of doors.
Door can't close of own accord.
Inexpensively installed.
Door balanced in any position.
Door entirely in building when open.
Has chromium-plated handle and cylinder lock.



FRANTZ
Guaranteed BUILDWARE



Levitt's Luxury Details

(Continued from page 73)

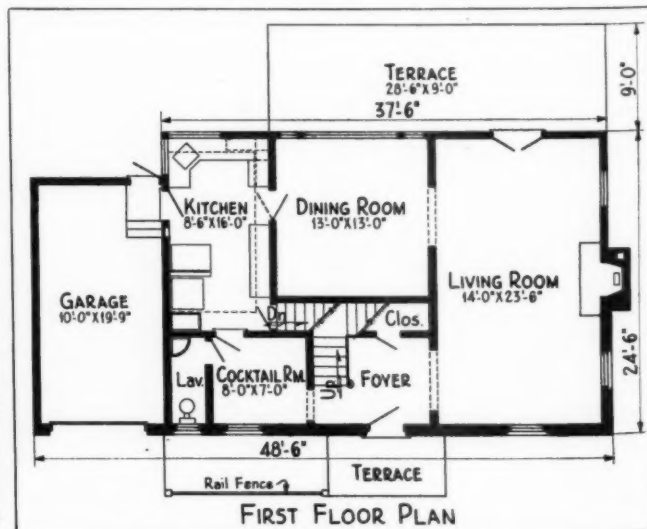
rooms, over fireplace mantels and in bathrooms. While the interiors are striking and attractive, they are done in good taste in colors that harmonize effectively.

Special note must be paid to the Levitt bathrooms, which are frequently double the size of the ordinary bath. The toilet fixture is usually placed in a separate compartment with an opaque glass door. A separate shower stall with a similar glass door is always provided in the master bath. In the latest type of bathroom, as illustrated with this article, a built-in tile ladies' dressing table with hot and cold running water is placed at one side of the room. A huge plate glass mirror is set in the wall over the tub. A portion of the floor near the entrance to the master bedroom is carpeted. This portion is 4 inches lower than the tiled areas. Lighting fixtures are ample and well placed, and there is an abundance of towel racks and other fixtures.

The latest Levitt kitchen, also shown with this article, is a housewife's dream of efficiency and completeness. There are extensive tile top work counters, two sinks, large and efficient cabinets. Ceilings are furred down in an interesting fashion.

Levitt houses are skillfully planned and built, and the Levitt crew of workmen, fortunate in having steady year-round work, is one of the best. Standard materials and equipment used include the following:

HEATING—General Electric winter air conditioning throughout.





LEVITT home as shown in this month's Color Insert (plans below)

INSULATION—Johns-Manville Rockwool insulation.

WINDOWS—Detroit Steel Products' Fenestra steel windows and screens.

REFRIGERATOR—Electrolux.

VENETIAN BLINDS—National Acme warp-proof blinds.

HOT WATER—Whitehead automatic gas storage heater with Monel tank.

PIPING—Anaconda red brass throughout.

PLUMBING FIXTURES—Kohler of Kohler.

GLASS—Pittsburgh plate glass throughout.

ROOFS—Bangor slate; copper nails.

KITCHEN RANGE—Tappan visual-controlled.

GARAGE DOORS—Stanley overhead-type doors.

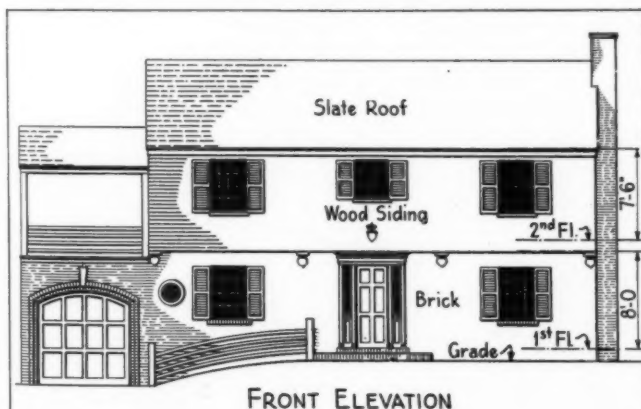
MEDICINE CABINETS—Columbia Metal Box cabinets.

CLOSET FIXTURES—Knappe & Vogt K-Venience fixtures.

HARDWARE—Schlage and Sargent.

KITCHEN CABINETS—Boro Wood Products.

Specifications also include poured concrete foundations, thoroughly waterproofed; No. 1 grade and trade-marked lumber throughout; copper leaders and gutters.



FRONT ELEVATION



SECOND FLOOR PLAN



I'm SAM the-Brownskin-Man

While Congress, newspapers, radio and forums are telling of the dire need of defence and security, America's architects will do something about the security of living conditions in American HOMES. By doing what?

Preventing passage of water, moisture and vapor; loss of fuel heat; damage to walls and ceilings; damp and drafty rooms and damage to structure caused by condensation of water vapor inside wall and roof spaces — by wrapping the house in Brownskin.

"Wrapped in Brownskin" insures a new measure of weatherproofing, dampproofing and vapor sealing built-in for the life of the house. Brownskin is unique. It is creped to s-t-r-e-t-c-h. It gives everlasting protection. It is especially treated to resist deterioration. It is tough; easily applied in high wind; conforms to uneven surfaces. It is an engineered specialty, waterproofed and moistureproofed by a special Angier vacuum process. There just is no protective wrap like Brownskin. It pays its own way. As necessary for the \$5,000 as for the \$18,000 house.

NEW IDEA! THRU-WALL FLASHING ceases to be a "tough spot" when Brownskin Through Wall Flashing is used. The principle is common sense — most protection where most wear comes. Different thicknesses or plies on one or both edges, the balance of lesser thickness. Send for isometric Drawings and Samples of Types 6-2; 5-3; and 6-2-6; 5-3-5.

DEALERS: WRITE ON YOUR LETTERHEAD FOR DEALER FRANCHISE-OPPORTUNITY

ANGIER CORPORATION
81 Widdell Street, Framingham, Mass.

SEND FOR SAMPLE of "Sam-the-Brownskin-Man". Also A I A File Folders on Brownskin and Copperskin.



7 BIG PROFIT EARNERS

for this Year's Concrete Jobs!

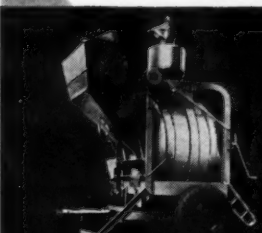
FASTER in every phase of the batch cycle, these modern, streamlined mixers are the "TOPS"! Lightweight, quickly portable, easy to spot, yet built to take hard everyday punishment for YEARS. Operating costs down to rock bottom assure BIG PROFITS on every job.



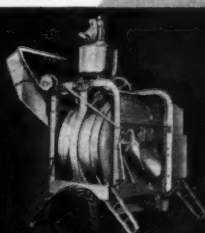
3 1/2-S

Tilting Mixer with same general design as the famous Smith high speed BOULDER DAM mixers. Handy feed chute. End-to-Center mixing action. Fast tilt and pour discharge through short 40 arc. Costs no more than ordinary "tub" mixers.

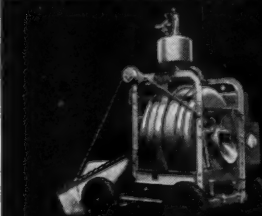
Mail coupon for literature



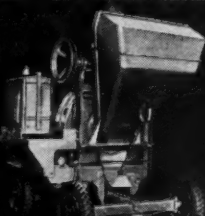
7-S TRAILSMITH — 2 wheel end discharge mixer.



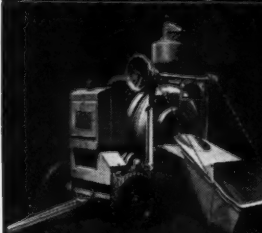
10-S TRAILSMITH — 2 wheel end discharge mixer.



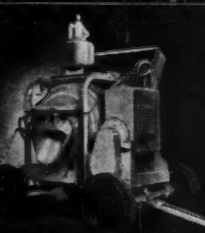
7-S NON-TILT — 4 wheel end discharge mixer.



10-S NON-TILT — 4 wheel end discharge mixer.



7-S NON-TILT — 4 wheel side discharge mixer.



10-S NON-TILT — 4 wheel side discharge mixer.

SMITH MIXERS

THE T. L. SMITH CO., 2849 N. 32nd St., Milwaukee, Wis.

Please send literature on the following:

☐ Smith 3 1/2-S ☐ Smith 7-S ☐ Smith 10-S

Name.....

Address.....



WILLIAMS-HARTER'S 1940 version of the historic Miller Cottage of Concord, Mass. The original was built around 1775.

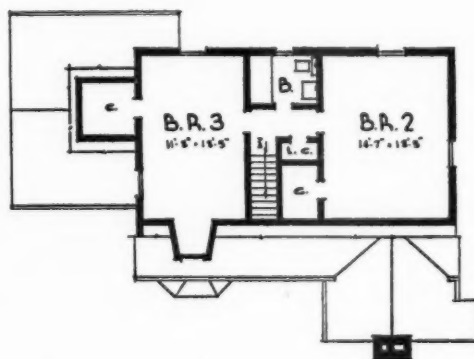
Betsy Ross Girls Sell Homes

(Continued from page 89)

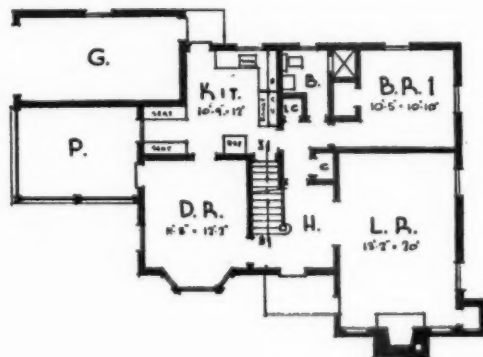
were erected and sold the first year. As this issue goes to press, a total of 122 individually designed Colonial homes have been built and sold in New Salem, and a new tract of land of 34 acres has just been acquired on the opposite side of the road to accommodate 150 more dwellings.

In addition to the showmanship involved in the Colonial idea, there are many solid and worthwhile features that make home ownership desirable in New Salem. Streets are artistically laid out in winding, wooded terrain. Lot sizes have been continually increased until at present the average is now 85 by 100 feet.

Since Williams and Harter are experienced substantial



SECOND FLOOR PLAN



FIRST FLOOR PLAN

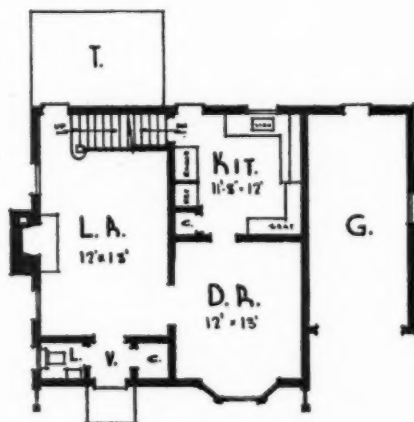
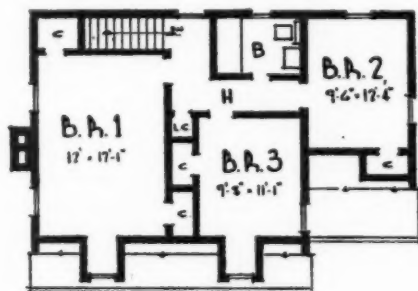
HISTORIC tradition but a modern plan. There are 6 good rooms and 2 baths in this 1940 version of Miller Cottage.



THIS is the Williams-Harter version of Putnam Homestead built in Early Colonial days at Greenwich, Conn.

builders, they are putting up substantial well equipped houses. Their standard specifications include: Curtis Silentite windows, Schlage locks, Standard Sanitary plumbing fixtures, Ketcham chromium shower doors, Chase copper pipe, slate roof, Pacific steel tubular boilers, Pass & Seymour switches and wiring, Bell & Gossett hot water plants, Perfex and Electrol oil burners, Lightolier lighting fixtures, Armstrong linoleum, Detroit-Jewel and Roper gas ranges, Johns-Manville rock wool insulation.

Painting throughout the development is executed in pure white lead paste, linseed oil, turpentine and drier, purchased in separate sealed containers and mixed on the job according to prescribed formulas. The brilliant, lasting colors featured in trim, sash, dormers, gables and shutters are achieved with colors in oil mixed in the formula to obtain the specially desired tones.



FIRST FLOOR PLAN

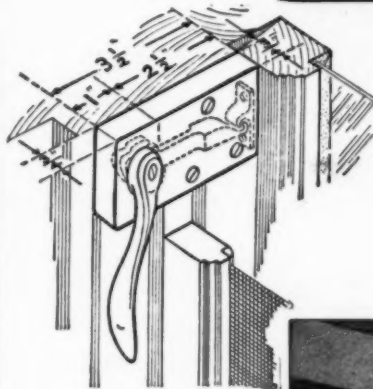
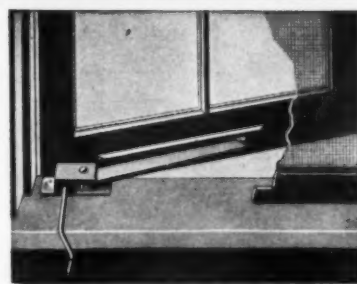
FLOOR plans of the modern version of Putnam Homestead are compact and efficient.

IVES

CASEMENT HARDWARE

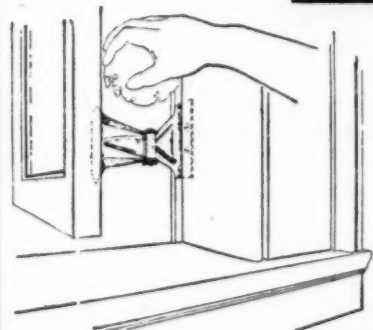
*Overcomes all Difficulties
in Operating Casement Windows
THRU THE SCREEN*

THRU - THE - SCREEN
WINDOW OPERATION
—The Ives Casement
Window Operator is
permanent, positive and
perfect.



CLOSES TIGHTLY
SASH THAT HAS
SWOLLEN — This
Casement Operating
Fastener reaches out
1/2" through the screen
to draw the window
in snugly.

PREVENTS WARPING
—The Ives "Adjustite"
Top Closer automatical-
ly closes the sash *tight*
and holds it securely.



WINDOW CLEAN-
ING MADE EASY—
The Ives Extension
Hinge gives a 4"
space between out-
swinging casement and
window frame.

Only a few of the many hardware specialties made by Ives.
Sold by good Builders Hardware Dealers the country over.

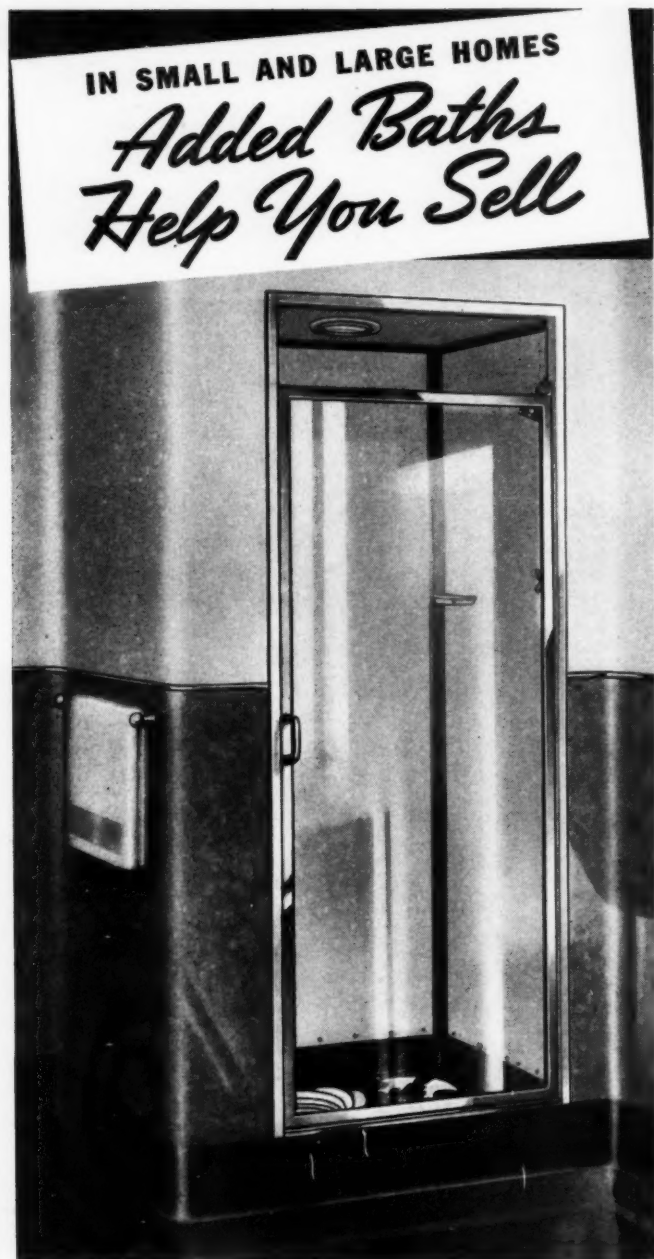
Folder C-2, fully illustrated, free on request.

THE H. B. IVES CO.

Quality Hardware Since 1876

NEW HAVEN

CONN.



● Weisways make possible added baths even in small cottages—and there are models equally adaptable for finest homes. Builders everywhere have proved that these leakproof, self-contained cabinet showers help close sales—and add dollar value far beyond their small cost.

Weisways are complete, independent units, thoroughly adaptable to modern construction materials and methods. Weisway receptors of vitreous porcelain have Foot-Grip, No-Slip floor with distinctive sea-shell pattern—safe, sanitary, silent as the tread of a bare foot. Get details and specifications.

MAIL COUPON TODAY

HENRY WEIS MANUFACTURING CO. (Est. 1876)
401 Oak Street, Elkhart, Indiana

Gentlemen: Please send specifications and detailed information on Weisways for ☐ new homes ☐ modernizing ☐ commercial or industrial building.

Name _____

Street _____

City _____

State _____

WEISWAY
Cabinet Showers

HAVE YOU HEARD?

EVERYONE IS TALKING ABOUT IT!

LOOK INSIDE

ATTENTION—getting envelope in which McGowan encloses advertising folder. People never fail to open this envelope.

\$25-a-Month House

(Continued from page 95)

In every way possible, McGowan has standardized his basic house and its materials and equipment. This permits him to do a considerable amount of work in his own shop. This workshop is located in a large building he acquired which also houses his office, and, incidentally, three attractive apartments upstairs which are rented and carry the upkeep of the entire structure.

In his workshop, McGowan fabricates an unusually attractive set of kitchen cabinets, built for the most part of $\frac{3}{4}$ inch plywood, with flush plywood doors. In addition, he makes door hoods, seats, corner cupboards, brackets, louvers, linen closets, and many other lumber and mill-work items. He keeps at least one man busy all winter, building these stock items. It also enables him to keep his small but regularly employed crew busy inside in rainy weather.

McGowan firmly believes that standardization is the only answer to low-cost home building. He has considered various approaches to the subject and has given thought to the possibility of building standardized wall panels in his shop but as yet has not gone that far. Included in the standard products and equipment he uses are copper gutters, leaders and flashing, copper piping, Richardson & Boynton boilers or Sunbeam warm air furnaces with Laco High-Low oil burner, Vancouver Artply decorative plywood, Masonite and Celotex interior wall finishes, U. S. G. asphalt roofing, Certigrade Red Cedar shingles, Unique windows, Standard plumbing fixtures, Schlage and National hardware and locks, Armstrong linoleum, Breinig paints.

Confucius Say--

"He Who Buys Home When Young
Has No Rent Problem When Old."

VISITORS TO "ELMORE" SAY—"The 'Elmore' Best
Home Buy on Long Island"

Visit MODEL HOME - Elmore St., C. I. - Open 1 P. M. to 9 P. M.

MODERN 4-ROOM HOME WITH SLATE DECK PORCH
Solid Oak Floors—Modern Kitchen—Beautiful Cabinets—Copper Gutters, Copper Plumbing—Unique Windows (no sash weight)—Inlaid Linoleum in Kitchen—Modern Heating Plant—Automatic Humidification—Radiators in every Room—Summer Hot water—All these and more—For Only \$2990.

BUILT ANYWHERE

\$2990

Payment Like Rent

NO CASH REQUIRED

COMPLETE

All Legal Charges
Included in Price

HAROLD MCGOWAN

Model Furnished by
Brown's Storage Warehouse
"Your Furniture Store"
Islip, N. Y.

SUFFOLK AVE. - CENTRAL ISLIP

Phone C. I. 6220

EVEN Confucius has been called upon to help McGowan sell his \$2,990 model house.

HAROLD MCGOWAN

Announces "THE ELMORE"

A 1940 COMPLETE HOME AT

\$2,990 BUILT ANYWHERE

You are invited to make an inspection.

Here are a few of the many features:

- Large four room home
- Double construction
- Felt insulation
- Double floors
- Finished floors, solid oak
- Linoleum kitchen and bathroom
- "Standard" plumbing and fixtures
- Bath and shower
- Special kitchen cabinets with linoleum counter tops
- Modern electric fixtures
- New type warm air heating with humidification.
- Large cellar
- Space for playroom
- Open porch with slate floor
- Brick steps
- Large attic
- Copper gutters and leaders
- Large closets
- Cross ventilation

NO MONEY DOWN!
SMALL MONTHLY PAYMENTS!

SUFFOLK AVE., CENTRAL ISLIP
Phone Central Islip 6220

House furnished by Brown's Storage Warehouse,
"Your Furniture Store," Islip, N. Y.

Furnished Model
Home open for in-
spection on Elmore
St., Central Islip,
10 A. M. to 9 P. M.

ADVERTISEMENT used in announcing the new "Elmore" model house.

McGowan backs his construction program with a clever but practical and inexpensive advertising program. He builds and displays a number of attractive signs, and regularly carries small advertisements in the local weekly newspaper. He recently titled his ad—"Confucius Say: 'He Who Buys Home When Young Has No Rent Problem When Old.'" He has also had much success with a folder enclosed in a No. 10 envelope, which has printed on it in large type:

"HAVE YOU HEARD?
EVERYONE IS TALKING ABOUT IT!
LOOK INSIDE"

This envelope is left at people's homes and never fails, according to McGowan, to get people to at least open it and read the folder inside.

In fact, McGowan has brought the smart merchandising, planning and building methods of the large metropolitan builders to the rural and small town section of Long Island, and he is getting real results.

Newlyweds and Nearlyweds

Here Is Just What You Have Been Looking For!

A BEAUTIFUL 4 ROOM HOME—MODERN IN EVERY DETAIL—
BEST BUY ON LONG ISLAND

BUILT ANYWHERE

NO CASH
REQUIRED

\$2990
COMPLETE

PAY LIKE
RENT

You Must See This Home to Appreciate It

"Elmore" Model
Home
Elmore St., C. I.

Furnished by Brown's
Storage Warehouse,
"Your Furniture
Store" Islip

Harold McGowan

SUFFOLK AVE. CENTRAL ISLIP, N. Y.
PHONE C. I. 6220

MODEL OPEN EVERY DAY — 1 P. M. to 9 P. M.

A TYPICAL McGowan advertisement is published in his local weekly newspaper at very low cost.

LET'S DO SOME *Figuring* ON BUILDING PAPER



IT PAYS TO USE **Sisalkraft**

IN THE FIRST PLACE, Sisalkraft costs less to apply. One man can handle it alone, even in the wind. It's TOUGH — pulls around corners and pushes into small openings without tears, punctures or waste. No batten strips. Figure in those savings and you'll find the APPLIED cost of Sisalkraft compares with even the flimsiest papers.

Then figure what you gain by using Sisalkraft. No worries! It's waterproof — permanent. Seals the building against drafts, water and dirt—stops leaks.

A better building at no more cost! The satisfaction of knowing you used the best! That's why it pays to use Sisalkraft for all side-wall protection — in every building. Ask your lumber dealer for demonstrating samples and information — or write us.

The SISALKRAFT Co.

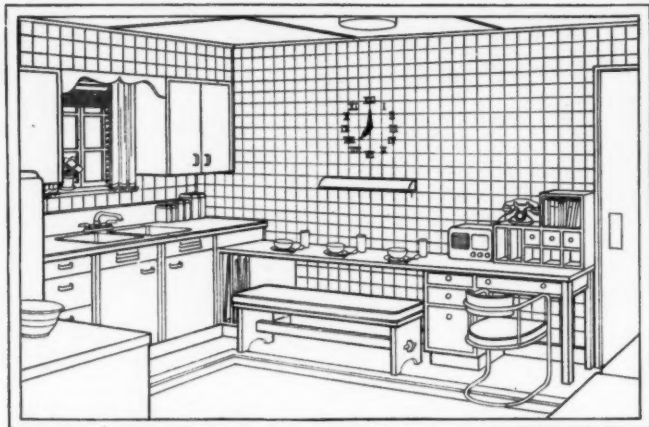
205 W. WACKER DRIVE

CHICAGO, ILL.

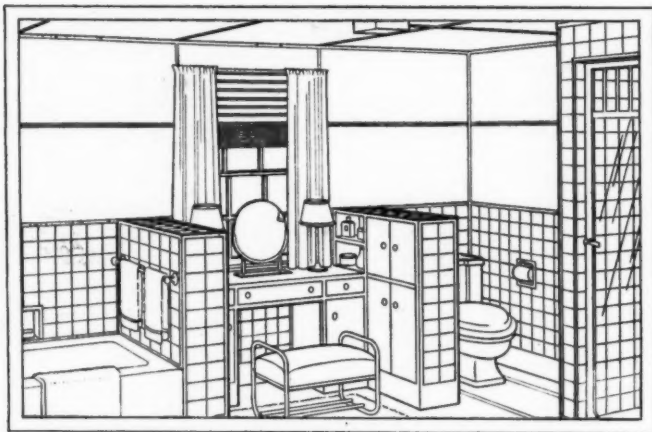
New York • • San Francisco

Sisalkraft

More interesting uses of Masonite Presdwood Temptrtile



Housewives dream of a kitchen like this. Here Masonite Presdwood Temptrtile is painted white with red stripes. Wall clock is an ordinary electric clock mounted behind a removable section of Presdwood Temptrtile. Snack bar, planning desk, sink top and splash board are Masonite Tempered Presdwood.



Spick, span and modern is this bathroom. Presdwood Temptrtile wainscot is painted white with black striping. Above the Temptrtile, Tempered Presdwood is used. In remodeling work these grainless, moisture-resisting boards can be nailed right over old walls. Built-in dressing-table and the convenient cabinets are faced with Tempered Presdwood.

The new-home and remodeling ideas shown on this page will be carried to millions of consumers in Masonite's national advertising appearing in May. We would like to have you examine Masonite Presdwood Temptrtile at close range and will gladly forward a sample. The coupon below is for your convenience.



MASONITE PRESDWOOD TEMPRTILE

The Wonder Wood of a Thousand Uses • Sold by Lumber Dealers Everywhere

COPYRIGHT 1940, MASONITE CORPORATION

MASONITE CORPORATION, Dept. AB-8
111 W. Washington St., Chicago, Ill.

Please send me a free sample and more information about Masonite Presdwood Temptrtile.

Name _____

Address _____

City _____

State _____



NICELY detailed stone front Colonial variation of Mott plan, shown on page 66.

MOTT SPECIFICATIONS

(Continued from page 67)

The success of this form of large scale operation with its definitely advantageous buying power, supported by sufficient volume to warrant the maintenance of a complete architectural and decorating staff, estimating department, and efficient construction organization, led the Mott Brothers early in 1938 to inaugurate an entirely new type of service in the building field—perhaps best described as a complete builders' service organization.

So, today finds Mott Brothers, Inc., officially out of the building business, busily engaged maintaining this service organization for builders—a plan which makes it possible for even those who operate on a limited scale to gain full advantage of the productive selling methods, operating efficiency, and time and money saving economies the large Mott Brothers' organization offers.

Functioning in this manner, Mott Brothers, Inc., are in reality building equipment and supply dealers. They maintain their own lumber and supply yard, and a complete warehouse which is recognized by the largest building material producers. In addition to the usual lines of building materials, they stock and handle heating equipment, hardware, plumbing supplies and mill-work. Materials and equipment are purchased in large quantities at wholesale prices—substantial savings are effected all along the line. Thus, important savings are passed along to their builder customers, and of course, ultimately to the home buyer. Further economies are effected through the maintenance of their own trucking



BRICK front variation of Mott plan shown on page 66. Window details and shutters handled with unusual skill.

and delivery service. They are able to quote their builder customers a guaranteed complete price which covers the cost of all equipment and materials for each house, and also furnish them with a detailed estimate showing what the labor cost should be for each individual job.

Under Mott Brothers, Inc., plan, actual construction is handled by the local builder, but the Mott organization provides the plans, estimates the cost, assists the builder in selling, and as stated before, supplies him with materials and equipment at guaranteed prices. Several such setups are already in operation. Houses built to Mott Brothers' specifications are located in Garden City and Flower Hill, Long Island; Colonia, Short Hills, Teaneck and Tenafly, New Jersey; and in Westport and Bridgeport, Conn. While thus far operations have been confined almost entirely to the large building development mentioned, Mott Brothers are in a position to provide this service for any contractor, large or small, within a 50 mile radius of New York City, whether it be for one house on an individual plot or in connection with a complete development.

As a means of further aiding their builder customers, an inviting home building headquarters has been set up by Mott Brothers, Inc., in the General Motors Building, New York City. Here these builders, as well as home buyers, find a complete display of kitchen and bathroom equipment, tile, wallpapers, millwork, lighting fixtures, hardware and other products used in the construction of houses built to Mott Brothers' specifications. Prospective home buyers are directed to the jobs as well as to the display room through consistent year-round advertising paid for by Mott Brothers, Inc. Participating builders bring their customers to this display room where sales help is rendered if necessary and architectural consultation is available. Trained decorators assist in picking out appropriate wallpapers, paints, tile colors, lighting fixtures, etc., assuring attractively decorated and finished houses.

Mott Brothers, Inc., believe that by participating in their plan, the local builder is able to give the home buyer a better planned, a better built house at a substantially lower price, and at the same time make a fair profit for himself.

Materials and Equipment

It is impossible to give more than a brief sketch of the Mott specifications. Brief excerpts include the following:

FOOTINGS—1-3-5 concrete 8" thick and 8" wider than the wall it carries.

CELLAR FLOORS—3" thick concrete subfloor with cement finish 1 part screened sand and 2 parts cement, trowelled smooth, marked off in 30" squares.

DAMP-PROOFING—Exterior cellar walls 1 coat asphalt emulsion.

FIREPLACE—Lining and back hearth fireclay brick laid in cement mortar. Bennett Fireplace Co. ashdump and cleanout door.

STUCCO—Mohawk Portland Cement stucco.

PLASTER BASE—Perforated gypsum board lath.

PLASTER—Mohawk Keenes cement plaster and White Lime Plaster.

INSULATION—4" Rockwool insulation 2nd floor ceiling, ceilings of dormers, bay windows and over garage or exterior porch.

DOOR AND WINDOW FLASHING—Copper flashing, extended 2" behind felt, neatly turned down 1/2" on front and secured with nails 6" on center.

ROOF—Slate laid over 24 lb. asphalt-saturated felt.

(Continued to page 144)

FLEXIBILITY for every job.... on the job!

Hundreds of builders never start a job without their DEWALT because its remarkable flexibility and dependable performance saves time, money and material by handling every job... on the job.

SAVES 20% TO 30%

These builders know, too, that DEWALT saves 20% to 30% in fabricating costs... it places the facilities of a complete woodworking plant on the job. From foundation to interior trim DEWALT cuts perfectly to help build better houses. Joists, studs, headers, rafters, etc... are custom cut on the spot.

SAVES TIME!

DEWALT takes the labor out of carpentry and speeds fabrication... one sawyer and helper keep 8 to 10 carpenters busy nailing up. DEWALT converts short pieces ordinarily wasted into close-fitting base blocks,

bridging, fire stops, etc... just another reason why... you can't afford to be without DEWALT.

SAVES DOLLARS!

Every time you mark off material and cut it with hand tools you're losing hard-to-make dollars. So don't wait for the next job... let DEWALT finish your current work ahead of schedule and earn you more money. Furthermore... DEWALT equipped builders are busy builders... they can give more house for the money.

GET THE FACTS YOURSELF!

Make us prove these claims. Ask for an "on the job" demonstration... it won't cost you one cent. Write today... or telegraph at our expense.

DEWALT

PRODUCTS CORPORATION
431 Fountain Ave., Lancaster, Pa.



PORTABLE POWER

For every Purpose and Pursue.
Terms to suit you.

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MOTT SPECIFICATIONS

(Continued from page 143)

TILE—Quarry Tile, matt glazed, cushion edged or vitreous ceramic tile in colors.

KITCHEN CABINETS—Murphy Door Bed Co. cabinets.

STEEL WINDOWS—Campbell steel windows, with 2" x 3" bevelled sill, 3/4" x 3" surrounds set in mastic cement securely screwed to frame. Frames flashed with asphalt felt and sills flashed with copper-plated asphalt impregnated felt.

WOOD SHINGLES—24" red cedar shingles laid with exposures not exceeding 11".

CLOSET FITTINGS—Knappe & Vogt K-Venience hat, shoe and tie racks.

MEDICINE CABINET—Columbia Metal Box Co. cabinet with 16" x 22" plate glass mirror door.

PIPING—Chase Brass Co. piping.

PLUMBING—Standard Sanitary Mfg. Co. bathroom fixtures.

GAS RANGE—Modern Maid gas range equipped with Robertshaw automatic oven control, automatic lighter and timer.

HEATING—Thrush Flow Control balanced single main hot water heating system, with Electrol E. C. series heating unit, with built-in tankless domestic water heater and oil burner with automatic controls. Richvar recessed radiators. Chase copper tubing with sweat fittings.

GLAZING—B quality with "Hold Fast" metal window putty.

* * *

We Draw Economies

(Continued from page 60)

exactly 12 feet wide, 16 inches on each floor beam must be wasted, for a 14-foot beam still is necessary.

Therefore, most room widths in the newest Long Island homes will be found to run 9'4", 11'4", 13'4", etc. The saving on costs through the use of standard size material, in this manner, often goes far toward making larger rooms more economical to build. And this is why the most popular living rooms in the modern Long Island small house measure 11'4"x19' or 13'4"x20'.

Reduces Waste Hall Space

Similar savings can be effected in strategic planning of ceiling heights by employing standard length studs. Since studs also come in multiples of 2 feet, an 8-foot stud resting on a 2-inch shoe and carrying a 4-inch plate will provide a clear ceiling height of 8'3". This allows 2 inches for double flooring and 1 inch for lath and plaster ceiling. Occasionally a certain amount of trimming or dressing of studs and beams may be necessary on the job, but this is a minor item compared to the waste of materials and time when non-standard sizes are used.

The arrangement of rooms is a vital point in controlling building costs and value of house delivered. Hallways, for example, can waste more cubic space in a house than they are worth. At the same time it is undesirable to place undue use on any room as a passageway to another room. An architect can allow himself about 10 per cent of the floor space of a house for more or less waste space. However, the farther he can reduce that 10 per cent margin the more efficient his floor plan will prove to be.

Circulation—that is, easy and convenient access to any one room from another, is a major factor in planning the

efficient house. If one may enter either living room or kitchen from front vestibule, or if one may enter directly either kitchen or dining room from living room without passing through any other room a maximum of comfort and step-saving will be achieved. Vigilance over waste space and over the increasing of easy circulation is extremely important in producing the most house for the money.

The proper placing of windows and doors often spells the difference between comfortable rooms and white elephants. The architect always must plan a room with definite furniture pieces in mind. Wall space is as valuable as window space and door space. Allowance must be made for the swinging of doors, and this is necessarily waste space. The distance between a window and the nearest corner of a room, or between one window and another, must be studied for its utility in the placing of furniture. If this wall is inadequate to accommodate a definite furniture piece, it may be expedient to move the placement of the window or the door.

Plumbing Savings Important

The elimination of one interior door is a big saving in the cost of a house under the modern scale of home building. Sometimes a door from living room to kitchen can easily and logically be eliminated in a bungalow layout when the natural passage is through a seldom used dining room. A saving of this kind in a development calling for 200 houses is not an item of \$10 for one doorway, but a total of \$2,000.

Stock sizes of windows should be specified in planning the small house. Steel casement windows save on the cost of trim, and in the Long Island field where they have been found to add to the salability of homes because of popular demand, their cost averages about the same as double-hung millwork sash.

Worthwhile savings in plumbing can be achieved by the proper arrangement of bathrooms. Plumbing stacks usually rise in a corner of a bathroom. If the bathtub, washstand, and toilet are scattered so that drains and supply lines must be carried around most of the room, considerably greater expense will be involved than in the sensible grouping of fixtures so that shortest lengths of pipe will be required. In almost all modern homes in the Long Island field baths are placed directly above kitchens in 2-story dwellings or directly adjoining kitchens in bungalows. This method of planning saves in pipe lengths and labor, and further increases the efficiency of the plumbing system.

Standard stock sizes in kitchen cabinets should be allowed for in planning the modern kitchen. Factory built wood cabinets have proved to be the most economical in the Long Island field, but the selection of wood or steel hangs largely on the relation between cost and public demand. Many builders have found that slightly more expensive details of equipment add more than their cost to the value of a house when it comes to salability. Departures along these lines, however, depend greatly upon local competition.

Universal, however, is structure, and what one may save here, all may save. The blueprints that call for roof rafters running parallel to ceiling beams will be far more economical than plans that show rafters at right angles to beams. Parallel construction affords convenient ties between rafters and beam, whereas contrary construction entails auxiliary ties that add to the cost of building.

The small house always has been and always will be first of all an economic problem. If a builder aims to lure buyers to his houses he will find the charming made-moiselle called Architecture far from being an expensive luxury, but actually a forthright asset.



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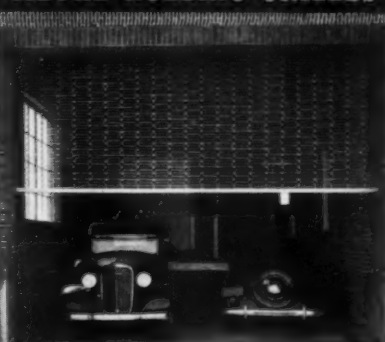
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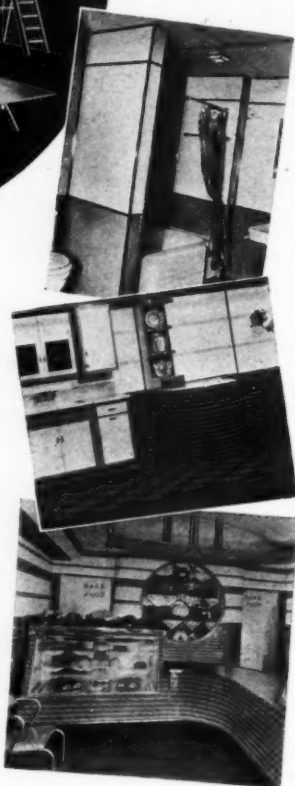
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THE STEEL SQUARE

(Continued from page 107)

rise at the center of the span cannot be measured from the drawing. A roof of this kind is shown in outline in Fig. 4. In such a case, the run and rise can be measured from the drawing to scale at some point other than the center of the building, as indicated in Fig. 4, where the rise of the rafter above the top of the wall plate measured at a point 3'6" from the inside of the wall plate is seven feet. The rise and run will both be in feet but they can be applied to the steel square to the scale of one-inch-equals-one-foot as shown in Fig. 5 where the line A-B has the same slope as the roof shown in Fig. 4. If, then, the square is laid on a large sheet of strong brown paper and heavy marks made along the outside edges of the tongue and the blade, the points A and B can be located on these lines and the line A-B can be drawn through them after lifting the square. A-B will then be the line corresponding to the slope of the roof. Now if the mark along the outside edge of the tongue on which the point A appears is prolonged to the right, the square can be set down on this mark again, as shown by the dotted lines, with the 12 inch mark on the outside edge of the tongue placed at the point A, so that the distance from the heel of the square to the point A will correspond to a one foot run. Then the point at which the line A-B (extended) crosses the outside edge of the body or blade of the square will show the rise-per-foot-run of the roof slope—in this case 24 inches per foot run.

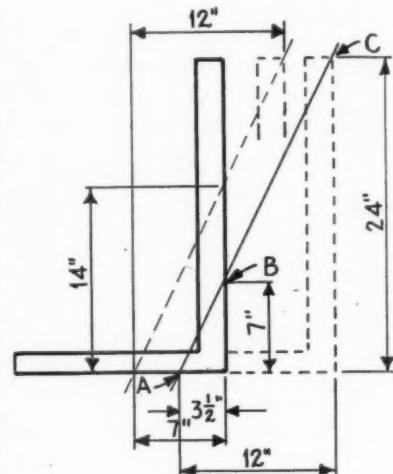


FIG. 5

Length of Rafter

Having established the rise-per-foot-run, the length of the rafter per-foot-run can be read off directly from the tables on the face of the blade or body of the steel square and from this the total length of the rafter from point P to point O can be found by multiplying the length-per-foot-run by the number of feet in the run. This will be the length of the rafter measured along the measuring line from point P to point O in Fig. 2, or from point P to point O in Fig. 4.

Fig. 6 shows that the Measuring Line is the straight line which might be drawn on the side of a rafter parallel to the line of the top edge of the rafter and passing through the outside upper edge of the wall plate and the length of the rafter per foot run referred to by the note on the face of the body of the steel square reading—"LENGTH OF MAIN RAFTERS PER FOOT RUN" is measured along this line as shown in Fig. 6, which explains itself. It shows the total run divided up into sections of one foot each and indicates the rise corresponding to each of these sections (in other words, the rise-per-foot-run) and also the length along the measuring line corresponding to each of these sections of the run and labelled LENGTH-PER-FOOT-RUN. It will be seen

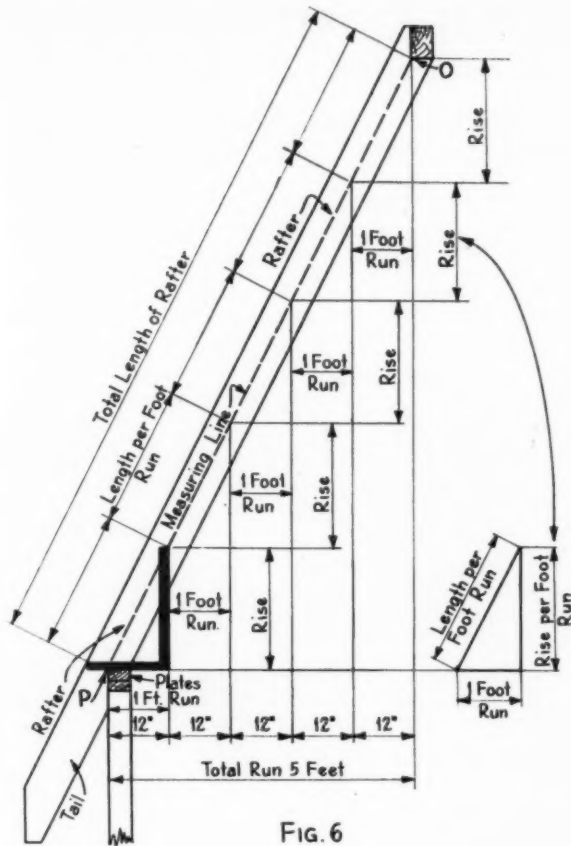


FIG. 6

that there are just as many sections of the total length marked "length per foot of run" as there are sections of the total run marked "12 inches," and this shows that multiplying the length-per-foot-run by the number of feet in the total run will give what is known as the "length" of the rafter, that is to say the length from point P to point O. To this of course must be added the amount of the projection of the rafter beyond the wall plate at the eaves, which is sometimes called the "tail" of the rafter. In the case of the rafters shown in Fig. 1, there

(Continued to page 148)

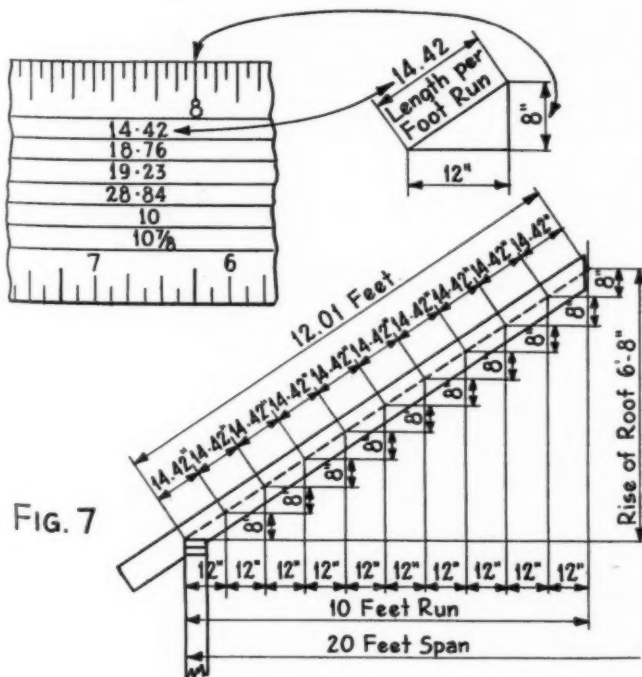


FIG. 7

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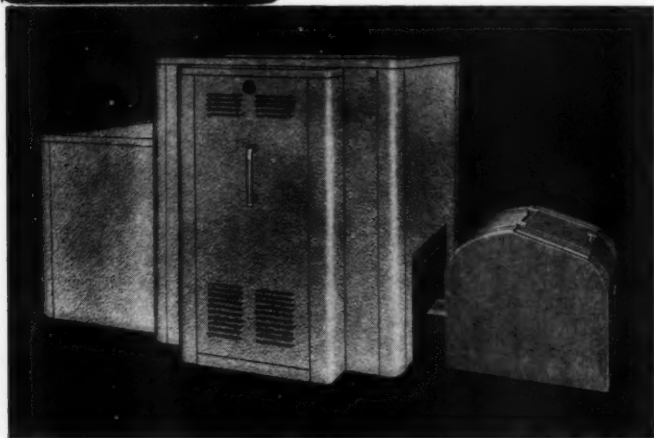
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THE STEEL SQUARE

(Continued from page 147)

is no tail at all and the measuring line coincides with the top edge of the rafter. The steel square is shown in Fig. 6 in the same relative position as it occupies in Fig. 2.

Use of the Rafter Table

A study of Fig. 6 suggests that another way to find the length-per-foot-run would be to take 12 inches on the outside edge of the tongue of the square and the rise-per-foot-run on the outside edge of the body or blade and to measure off the diagonal distance between them—distance A-C in Fig. 5. However, there is an easier way by which the length can be read off directly from the rafter tables on the face of the square. To do this you first have to find the *rise-per-foot-run* as explained before and then find in the inch line on the outside edge of the face of the body of the square the figure which is the same as this rise. It might, for example, be 8 inches as shown in Fig. 7. On the best squares there would be found underneath this inch marking a column of figures as shown in Fig. 7, and the top figure in this column will be in each case the length (in inches and hundredths of an inch) per-foot-run corresponding to the rise per-foot-run which appears in the inch line on the edge of the square directly above. See Fig. 7. The rest of the figures in the column underneath the inch mark 8 are for other purposes, which will be explained later on.

RULE: The rule, then, is as follows:

To find the lengths of common rafters per foot of run, look on the first line below the outside edge of the face of the blade, see Fig. 9, which is marked "length of main rafters per foot run," and under each of the numbers in the inch line on the top edge of the blade of the square from 18 inches down to 2 inches will be found numbers giving, in inches and hundredths of an inch, the length per foot run of rafters whose rise per foot run is 2 inches, or 18 inches, or any number of inches in between. Then, to find the "length" of the common rafter, multiply this "length-per-foot-run" by the number of feet in the run, which is one-half of the distance in feet across the building from outside to outside of the wall plates.

EXAMPLE: Find the length of a common rafter in a roof where the rise per foot of run is 8 inches and the width of the building from the outside edge of the wall plate on one side to the outside edge of the wall plate on the other side is 20 feet. The roof will have a one-third pitch. The run will be one-half of 20 feet or 10 feet.

First, find the rafter tables on the face of the steel square blade, see Fig. 8. Locate on the inch line along the outside edge of the blade the figure which is the same as the rise per foot run of the roof. In this example, the figure will be 8, since the rise per foot run is 8 inches. See Fig. 7. Next, look on the first line under the figure

Outside Edge of "Body" or "Blade" of Steel Square, Face Side

23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
LENGTH OF MAIN RAFTERS PER FOOT RUN																							
21.92	21.84	21.76	21.68	21.60	21.52	21.44	21.36	21.28	21.20	21.12	21.04	20.96	20.88	20.80	20.72	20.64	20.56	20.48	20.40	20.32	20.24	20.16	20.08
DIFFERENCE IN LENGTH OF JACKS IN INCHES CENTERS 20 FEET																							
0.84	0.82	0.80	0.78	0.76	0.74	0.72	0.70	0.68	0.66	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.50	0.48	0.46	0.44	0.42	0.40	0.38
SIDE CUT OF JACKS USE THE MARKS																							
8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
21.92	21.84	21.76	21.68	21.60	21.52	21.44	21.36	21.28	21.20	21.12	21.04	20.96	20.88	20.80	20.72	20.64	20.56	20.48	20.40	20.32	20.24	20.16	20.08

FIG. 8 RAFTER TABLES

8 and you will find 14.42, which means that the length of the rafter per foot run is 14.42 inches. Since the run is 10 feet and the length of the rafter per foot run is 14.42 inches, the "length" of the rafter will be 10 x 14.42 inches,

which is 144.2 inches. By dividing by 12 this is found to be 12.01 feet, as shown in Fig. 7. This can be considered to be 12 feet.

Procedure When Roof Slope Is Given in Degrees

To make use of the steel square in accordance with the above quoted Rule it is necessary to know the pitch of the roof in terms of the rise per-foot-run which is the same thing as saying that the slope of the roof is so many inches in 12 inches. Occasionally the carpenter may be informed that a roof is to have a slope of so many *degrees*, perhaps 30 degrees or 40 degrees or 50 degrees. This refers to the angle between the sloping measuring line in Fig. 2 and a horizontal line such as the line marked "level of wall plate" in Fig. 2. If you know that the roof is to have a slope of approximately 30 or 40 or 50 degrees, it becomes necessary to determine from this information what the rise-per-foot-run will be. Fig. 9 shows a number of different *degrees* of slope laid out with relation to the steel square to give the slope in terms of inches-in-12 inches corresponding to each of the different *degrees* of slope. To use the rafter tables directly for finding the rafter length it will be necessary to have the rise-per-foot-run in even inches instead of in inches and fractions of an inch, but if the slope is given in degrees, it will be sufficiently accurate to refer to Fig. 9 and take the nearest full number of inches in 12 inches. For example, a 30 degree slope is 6-15/16" in 12", but a slope of 7 in 12 would be very nearly 30 degrees and a slope of 10 in 12 is very nearly 40 degrees.

The next article of this series will describe and illustrate a method for finding the rafter lengths by the use of the steel square when the particular square available does not have the rafter table engraved on the face of the body or blade and also how the rafters are actually laid out and the heel cut and top cut properly made to suit the run and rise of the roof.

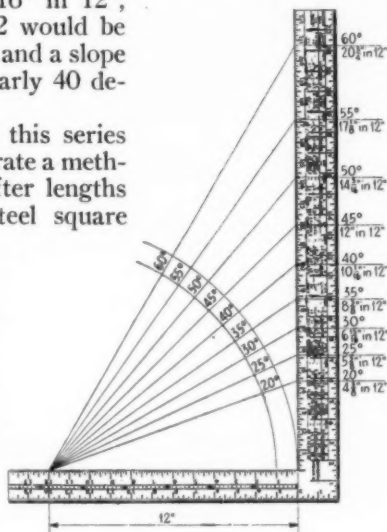


FIG. 9

* * *

Prefabricated Steel Panel System

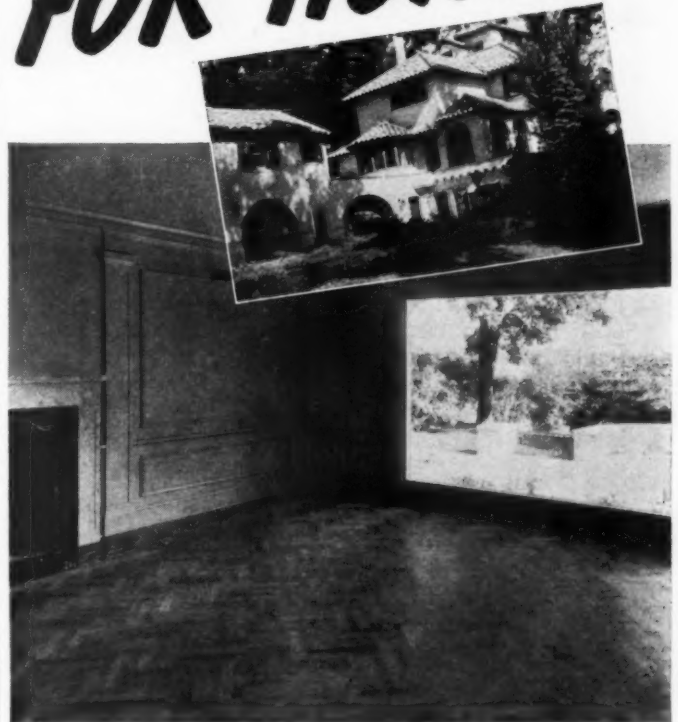
(Continued from page 110)

value is especially high, since it is not easily damaged by taking down or transporting to another site. Its light weight and compactness reduce shipping costs.

Lindsay Structure panels are superior in weather tightness to most sheet metal joints except good crimp-and-solder or solid line welding. The roof can be quickly and thoroughly waterproofed by applying a calking compound to the joints. Its parts are furnished with a black steel or galvanized finish, to which paint or special finishes can be easily applied. Insulating material can be placed between the wall and lining by fastening furring strips to the flanged channels.

Lindsay Structure can be used to make general industrial buildings, pump houses, meter houses, garages, warehouses, small shops, contractor's shacks, freight houses and loading docks, as well as tourist cabins, concession stands, filling stations, and other structures. Its unique construction lends itself to an unlimited number of applications.

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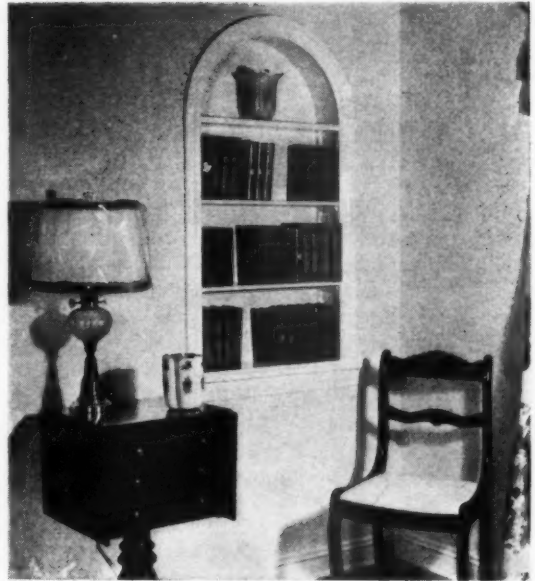
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BOOKCASE niche in a Gross-Morton living room.

America's Largest Home Builder

(Continued from page 71)

handled the firm's sales literature, newspaper advertising and promotion material. Some of the successful architectural planning methods employed by Mr. Allen are described in another article in this issue. The sales promotion method of Mr. McKenna and his associates in Metropolitan Advertising Agency of New York City, were described in detail in the April 1939 *American Builder*.

Although firms such as Gross-Morton are frequently described as speculative builders, there is actually very little speculative home building involved. Sales are made from the model homes built early in the year. Through intensive advertising, prospects are brought out to view the model homes where they select the style that fits their taste and pocketbook, the lot on which they want it and the interior colors and decorations that appeal to them. As a rule, Gross-Morton orders are far enough ahead so that they can build at least 10 to 25 houses at a time, and frequently much larger numbers.

With nine different floor plans, each of which may have a variety of exterior treatments, the home owner has an ample range of different houses to choose from.

Two Most Popular Types of Homes

Accompanying this article are shown the most popular two-story Gross-Morton house known as the J-type and the most popular one-story model known as the JBC bungalow. This little bungalow has much to recommend it, with the front and side entrances, two coat closets and stairs cleverly grouped in one corner at the front of the house. The bedrooms are at the rear where they have privacy and quiet. The bathroom and kitchen plumbing is economically placed back to back. In addition to the five rooms and bath downstairs, the home owner can have several additional rooms and a bath, if desired, upstairs providing an especially large house for the price.

The Gross-Morton interiors are colorful and attractive, and special attention is paid to the kitchens and bathrooms. Practically all the houses have fully tiled baths, with a separate shower stall with glass door. Other materials and equipment include: Celotex Vapor-seal sheathing, U. S. Gypsum Rocklath plaster base with three coats of plaster, General Motors Delco oil burners with Thatcher steam boilers, Ketcham glass shower stall doors by G. M. Ketcham Mfg. Corp., of Brooklyn, Ludowici-Celadon tile roofs, copper water pipes and flashing throughout, Kohler of Kohler bathroom fixtures in color, Boro Wood Products kitchen cabinets.

The Gross boys and Larry Morton are proud of the job they are doing and confident of the future. They are particularly proud of the fact that they are now getting the second generation of

home buyers in their newer developments, the sons and daughters of people who bought homes in their earlier developments. "Nothing could make us feel better," Larry Morton told *American Builder*, "than to have a young couple say, as one did just the other day, 'When we got married we decided that nothing but a Gross-Morton home would do—just as our parents did.'"



ANOTHER variation of popular JBC-type Gross-Morton bungalow, with space for additional rooms on second floor. Floor plan shown on page 71.

* * *

Designing Schools

(Continued from page 99)

tical properties. Thus was avoided the necessity of installing special acoustical board. And reduction of noise and echo in a schoolroom or in the corridors is highly desirable.

To reduce noise further, linoleum was used in the corridors and in the kindergarten; asphalt tile floored all the classrooms. Ceilings were finished with a wood fibre board.

School planning requires more space per room than it used to. This does not necessarily mean that each teacher carries a heavier pupil load. Rather, the extra space is needed because of the change in educational technique. Emphasis is being placed more and more on interest-group instruction as represented by the domestic and manual arts and sciences.

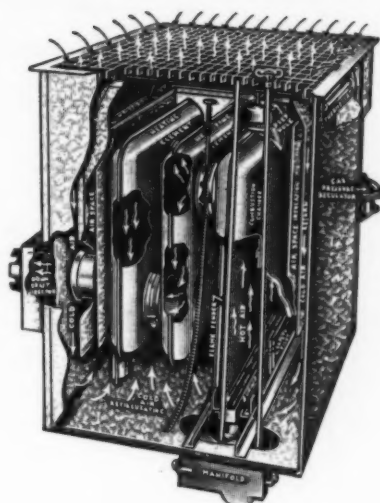
Taking this trend into account, classrooms were made 22x32½ ft. This is the equivalent of more than 8 per cent more floor area than is found in the classroom of customary size. The school contains six rooms 22x32½ ft. and two more this size augmented by 9x16-ft. alcoves.

All hardware and finishing were selected with economy and low maintenance in mind. Everything, however, was chosen in accordance with modern standards of comfort and health. That these were secured is evident from the following partial list of features:

Salt-glaze tile base throughout, concrete stairs with grits cast in the treads, concrete stairway railings, vitreous china plumbing fixtures throughout, coded fire alarm system, two lighting circuits per room with the inner row of lights controlled by electric eyes, a central radio and automatic phonograph with a speaker in each room, electric clocks in all rooms, split system of ventilation and forced hot water heating, zone control of hot water heat, and copper water pipe.

Board and Yates were the general contractors. James E. Cotent was the plumbing and heating contractor, and M. E. Bowers the electrical contractor.

PEERLESS GAS-FIRED FLOOR FURNACES



For Homes Without Basements

STOP! "It's wonderful" exclaim housewives everywhere—Light the pilot at the beginning of the heating season. All heating worries are over.

LOOK! No basement required. A size for every type of dwelling. Sizes range from 20,000 B.T.U. to 75,000 B.T.U. input. Economical to install.

LISTEN! "It's quiet"—and efficient. Warm healthful air circulates thru-out the room.

Write Today
for Prices
and Literature



**The FIRE-GUARD
Automatic Coal
Stoker is
America's most
beautiful unit**

Truly a nationally accepted stoker.

A size for practically every need. Capacities range from 14 to 400 lbs. (Coal burning per hour)

ATTENTION DEALERS: Some territories still open. Write us today.

**PEERLESS MANUFACTURING CORP.
LOUISVILLE, KENTUCKY**

New 3½-S KWIK-MIX non-till

Modern Rubber Roller Drum Drive



No ring gear—no pinion
—no countershaft, less
wear—smooth running.

**LOAD WHILE
MIXING—
INCREASES
PRODUCTION
40 TO 50%**

**END
DISCHARGE**

Write For Bulletin 2X

KWIK-MIX CONCRETE MIXER CO.
PORT WASHINGTON . . . WISCONSIN

250 Largest Long Island Developments

(Continued from page 85)

Map No.	Development	Price Range	No. of Homes Built	
			1939	Total
23.	Bradford (Nathan Bright), Elmhurst.....	5,000- 6,500	20	40
23.	Mayflower (Bernkoff), Elmhurst.....	5,000- 6,500	30	50
23.	High Park Homes (Human & Rosenberg), Elmhurst.....	5,000- 6,500		100
23.	Juniper Park Homes, Elmhurst.....	4,900- 6,000	20	150
23.	Green Park Estates (Turner & Noone), Elmhurst.....	5,000- 6,000		100
23.	Fairhaven Homes (Kalvasky & Davis), Elmhurst.....	5,250- 6,000	50	50
23.	Goodwill Homes (N. J. Manone), Elmhurst.....	5,250- 6,000	40	50
23.	Choice Homes (H. W. Gibbs), Elmhurst.....	5,250- 6,000	40	50
23.	Fairview Homes (Bernkoff), Elmhurst.....	5,250- 6,500	40	50
23.	Superb (H. Guterman & Miller).....	6,000- 6,500		50
23.	Victoria (David Minkin), Middle Village.....	5,000- 6,250	15	40
23.	City Park Homes (Sol Atlas).....			40
24.	Splendid Homes (Jocquef Schupf), Forest Hills.....	6,000- 7,000	25	35
24.	Nu Mode Homes (E. Scarpinato & Sons), Flushing.....			25
24.	Integrity Homes (Fleischer), Rego Park.....	5,400- 6,500	20	40
24.	Forest Hills West Homes, Forest Hills.....			35
24.	Forwin Homes (Louis Jacobi), Forest Hills.....	5,000- 6,500	40	50
24.	Armon Homes (Armon Olivieri), Forest Hills.....	5,000- 6,000	50	60
25.	Janel Homes (Kessler), Ridgewood.....	5,500- 7,000	50	75
26.	Nira Homes (Greig & Sifferlen), St. Albans.....	6,500- 7,500		50
27.	Villett Homes (Anthony Villett), Flushing.....			50
28.	Fulton Homes (Joe Fulton), (See Jaxland), Flushing.....	5,990		70
29.	Independence Homes (Henry Muss), Bayside.....	5,500- 7,000		100
30.	Monaco Homes (James Monaco), Bayside.....	4,000- 5,000	40	50
31.	Seid (Gustav Seid), Flushing.....	5,000- 5,750	20	40
32.	Prime Homes (Halbrecht & Bluestone), Flushing.....	5,000- 6,000	50	100
33.	Forest Park Homes (H. Hildebrand), Flushing.....	5,000- 6,000	30	50
34.	College Homes, Flushing.....	5,000- 5,750	40	70
35.	Pless Homes (M. Dalis), Flushing.....	5,000- 5,750		30
36.	Flushing Estates (M. J. Roth), Flushing.....	4,300- 5,500	100	200
37.	Harmon Homes, Flushing.....	5,500- 6,500	25	30
38.	Hillside Court, Flushing.....	6,000- 8,500	30	40
39.	Gross-Morton Bayside Hills (Geo. Gross), Flushing.....	6,000- 8,500	100	400

**LOOK
CHECK
BUY**



"TRIPLE-CHECK" PROTECTION

- ✓ I-B-R Approved Ratings
- ✓ Bonded Output
- ✓ Tested and Proven... Research—Field—and over 45 Years of "National" Quality.

Oil- or Coal-Fired... Red and Black Crinkle-Finish Jacket... Burner Control Tappings at Rear... Front or Rear Burner Installation... Front Flow Tapping for Forced Water Circulation Systems.

TESTED



Lots of Hot Water... Built-in Heater—Steam or Hot Water.



More Heat Extraction with Extended Fingers and Heat Conservers.



Free Circulation... Full-length, unrestricted waterways.



Heat Sealed in... Jacket insulated clear to floor line.

WARMTH

NATIONAL RADIATOR PRODUCTS



No. 1 SERIES

"Heat Extractor" Boiler Selected for Rorch Small Home Development described in this issue.



Fuel-Saving 4-primary, 1-secondary flues... 4-pass gas travel.



Observation Port and special tapping to check flame and draft.



Special "Easy-Fit" Prefabricated Combustion Chamber.



Wet-Base adds capacity to compact design.

THE NATIONAL RADIATOR COMPANY JOHNSTOWN, PA.
MEMBER INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS

40. Morton-Praver (Barney L. Morton), Flushing.....	5,000-6,250	40	40
41. Green Park Estates (J. L. Turner), Flushing.....	6,000-8,500	50	75
42. Insured Homes (Town House), (B. M. Hess), Kew Gardens.....	6,000-7,500	50	64
43. Kessler Homes (Sidney Kessler), Ridgewood.....	5,500-7,000	30	40
44. Estates Housing (Paul Roth), Flushing.....	6,500-8,000	50	
45. Kew Gardens Hills (A. B. Wolosoff), Kew Gar- dens.....	8,500-14,000	150	
46. Parkway Community (E. F. Bonner), Jamaica.....	6,000-10,000	40	100
46. Surrey Estates (Max Oehler), Jamaica.....	5,500-8,500		
47. University Manor (Hillier & Edkins), Flushing.....	6,000-8,500	40	
48. Pless Homes (M. Dalis), Flushing.....	4,500-6,000	50	
48. Orseth, Flushing.....	5,500-8,500	40	40
48. Marvel Homes (Fladel & Zwerf), Flushing.....	5,500-7,000	20	35
48. Horace Harding Homes (Morton Wolosoff).....	5,500-7,000	20	75
48. Moss Homes, Inc. (Joseph Moss), Flushing.....	5,500-7,500	40	40
48. Holliswood Homes (Paul Roth), Flushing.....	5,500-7,500	50	
48. Gross-Morton-Jamaica Estates (George Gross), Flushing.....	5,500-8,000	400	
48. Approved Homes (Jos. B. Alderman), Flushing.....	5,000-6,250	30	40
48. Cunningham Pk. (Wm. Adelman), Flushing.....	5,500-7,500	20	40
48. Hollis Hills Homes, Hollis.....	5,500-7,500		35
48. Fresh Meadow Homes (Adelman), Flushing.....	5,000-6,500		70
48. Foch Building Corp., Flushing.....	5,500-8,500	20	30
48. Sterlingshire-United Associates, (S. A. Gogel), Jamaica.....	7,500-10,000	25	
49. Horsch's Homes (Frank J. Horsch), Bellerose.....	4,250-5,500	87	
50. Park Hill Homes (Rosen), Bellerose.....	4,500-6,000	40	50
51. Bellerose Manor (L. C. Lemmerman).....	4,250-5,500		500
52. Insured Homes (B. M. Hess), Bellerose.....	3,700-5,000	140	158
53. Dahl Homes, Bellerose.....	4,500-5,500		50
54. Dominion Homes (Phillips Bros.), Bellerose.....	4,250-5,500		75
55. Hillside Estates (D. Warshauer), Herricks.....	4,250-5,500		50
56. Hillwood Homes (Lee), Hollis.....	5,500-7,000		25
57. Sterlingshire (Sam Gogel), Jamaica Estates.....	7,500-10,000		50
58. Gaw-nel Homes (Nelson), Queens Village.....	5,500-7,500	25	
58. Spencer Homes, Inc. (Geo. La Pasta), Queens Village.....	5,500-8,500	40	
59. Plymouth Heath (Benj. Evans), Springfield, Jamaica.....	4,250-5,000	25	
60. Gilroy Homes (Casper & Goldfein), Jamaica.....	5,000-6,000		50
61. Holban Homes (Max Spevack), St. Albans.....	5,000-6,000		50
62. Strand Homes, Inc. (Ed. Miller), St. Albans.....	4,250-5,000		25

(Continued to page 154)

WAGNER TRACKS AND HANGERS

NO. 100 TRACK NO. 15 TRACK



A complete modern line for every purpose. No. 1500 series Roller Bearing Hangers operate in both No. 100 and No. 15 Track. One Hanger — two tracks. Simplifies installation. Assures satisfaction. Write for literature.

NEW FOLDING ALL-METAL

SAW HORSE LEGS!

One of the most USEFUL items ever developed for the building industry. These all-metal legs fold for easy transportation—never wear out—set up in seconds with any 2 x 4 or 2 x 6. Save material—save time. Alligator grip holds legs securely. 2 heights—24" and 30". Ideal for temporary tables, stands, counters, etc. Hundreds of uses.



WAGNER MANUFACTURING COMPANY
DEPT. AB-440, CEDAR FALLS, IOWA

Friendly Doorways by McKINNEY give EXTRA SALES APPEAL to your Homes

First impressions count—and a Friendly Doorway is a silent salesman for good taste and quality building.

McKinney Forged Iron Hardware lends warmth and charm to every door and is adaptable to most homes in any price range.

You'll find quality hardware throughout the home helps make SALES and SATISFIED HOME OWNERS.

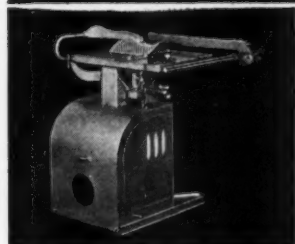


McKINNEY MANUFACTURING COMPANY • PITTSBURGH, PA.

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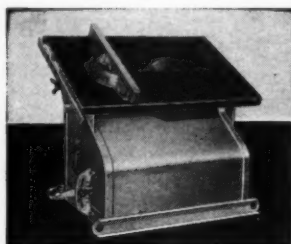
YEARS OF DESIGNING AND MANUFACTURING GOOD HARDWARE

MC FAST PRECISION SAWING WITH KOSTKUTTER SAW RIGS



KOST KUTTER JR.

A keen sawing outfit that gets the work done quicker. Tilting top—10" saws powered with famous 3.6 H. P. Briggs & Stratton engine. Saw-dust proofed. Easy to transport.



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Sensationally new. Completely enclosed and saw-dust proofed mechanism. Tilting top, 14" saws. 6 H.P. Wisconsin engine. Takes up to 4 inch stock. CMC also makes the "Power Sawyer" ... a big outfit with 16" or 18" blades for 6" stuff.

NEW CATALOG Get this book showing the newest Mixers, Pumps, Hoists, Saw Rigs, Carts, Barrows and other new equipment in this year's wonderful new CMC line.

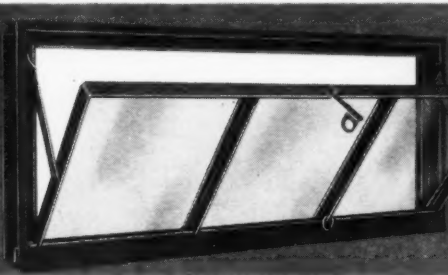
**CONSTRUCTION MACHINERY COMPANY
WATERLOO, IOWA**

250 Largest Long Island Developments

(Continued from page 153)

63. Equity Homes, Inc. (Louis Finkler), St. Albans...	4,500-	5,500	35
64. Aura (Tollie & Geluso), St. Albans	4,500-	5,500	25
65. Greendale Homes, Inc. (Lee & Paul Reizen), St. Albans	4,500-	5,750	25 50
66. Newman Homes (Jas. J. Newman), St. Albans	6,000-	7,000	25
66. Dorset Homes, Inc. (Olanoff & Spivack), St. Albans	4,500-	5,500	25
66. Queens Lawn (Baron), St. Albans	4,500-	5,500	25
66. Gateway (George Spevack), St. Albans	4,500-	5,500	50
66. Southern State Parkway (E. Beck), St. Albans	5,000-	7,000	200
66. Reizen, St. Albans	5,000-	6,000	25
66. Garland Manor Homes, Inc. (E. Beck & Jos. Moscioli), St. Albans	5,000-	6,000	60
66. Morton Homes (Goldberg), St. Albans	5,500-	6,500	25
66. Jefferson Homes, Inc. (V. Ruggiero), St. Albans	5,500-	6,000	75
66. Insured Homes (B. M. Hess), St. Albans	4,490-	4,990	95
67. Merrick Park Gardens Corp., Jamaica	5,500-	6,000	25
68. Bonsell Homes, Elmont	3,800-	4,500	75
69. Waldron Homes (Sam & Ben Reizen), St. Albans	5,500-	6,500	25
69. Newman Homes, St. Albans	6,000-	7,000	50
69. Eton Homes (De Chario), St. Albans	5,500-	6,500	75
69. Excello (Gladston & Etkin), St. Albans	5,500-	7,000	75
69. Kurgold (Kurland & Goldberg), Flushing	5,500-	6,500	50
69. Frankon (Walter Spackler), Elmont & St. Albans	4,250-	5,500	125
69. Thrifty Cottages (Sam Wanen), St. Albans	4,500-	5,500	30
69. Lincoln Homes, Inc. (Jos. Berdick), St. Albans	5,500-	6,000	50
69. Select Homes (Jack Greenman), St. Albans	5,500-	6,000	25
69. Harben Homes, Inc. (Levin), St. Albans	5,500-	6,000	25
69. Skillman Homes Corp. (Ben Biegeleisen), Franklin Square	3,500-	5,000	75
70. Fellows & Friese (Frank K. Fellows), Uniondale & W. Hempstead	3,000-	4,000	60
71. Forman, New Hyde Park & St. Albans	4,250-	5,500	60
72. Brampton (Roth), Springfield	5,000-	5,250	25
73. Brody, Laurelton	6,500-	7,500	75
74. Jay-Bee (Joe Berdick), Laurelton	5,500-	6,500	75
75. Stratford Bros., Rosedale	5,000-	6,000	40
76. Delwood (Andrew Warwick), Ozone Park	5,000-	6,000	25

The New VENTO CHAMPION



Virtually 2 WINDOWS IN 1

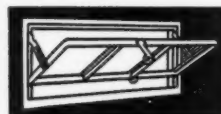
Combines the Chief Advantages of ALL Basement Windows in ONE

In this day of vital interest in better basements you'll find the new Vento Champion basement window the sure-fire route to arousing interest in every prospect; to assuring complete satisfaction to every owner. Operating both as a top-hinged and a bottom-hinged window, it gives each individual exactly the type of ventilation and opening he desires. Moreover, it is an extremely well built window; exceptionally weather-tight and bound to operate perfectly under all conditions; designed for quick and easy installation, neat and quick attachment of screens and the most practical method of puttyless glazing.

Costs Nothing Extra Not one cent more than any other first line window; less than some, in fact. Ask your dealer about the new Champion at once, or write for complete details. We're confident it's THE basement window you will want to standardize on.

A Complete Line Vento offers you a complete line of window products for all types of buildings. Write to us for complete information on any type you are interested in. Or, better still, ask your dealer about them.

Vento Steel Products Company has been long and favorably known for its excellent dealer cooperation.



TOP VENTILATION

Ventilator tilts in at top, giving ample ventilation for normal requirements. In this position ventilator deflects drafts upward and retards entrance of rain, snow and dirt.

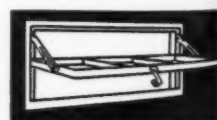
ANY DEGREE OF VENTILATION BY JUST A SLIGHT DOWNWARD PULL. VENTILATOR IS WELL BALANCED.

By pulling the top of ventilator in and down, any degree of opening up to 100% can be obtained.



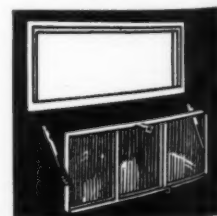
SWINGS FROM TOP IF DESIRED

If owner prefers action of top-hinged window it is obtainable with the new Champion by simply lifting the ventilator from the sill and reversing it as shown at left. Ventilator may be held in open position by ceiling hook.



VENTILATOR QUICKLY REMOVABLE FROM FRAME

Ventilator is entirely removable from frame either before or after installation for ease in glazing or for any other purpose where maximum opening is desired such as to facilitate removal or passage of boxes, crates, etc.



VENTO STEEL PRODUCTS COMPANY, MUSKEGON, MICHIGAN

77. Walgren, Ozone Park.....	5,000- 6,000	25
78. Benris (George Rosen), Elmont.....	5,500- 6,000	60
79. Tru Homes (Heumann & Rosenberg), Elmhurst.....	5,000- 6,000	50 75
80. Hadley (Benj. Wesley), Ozone Park.....	6,000- 6,500	25
81. Ercole, Howard Beach.....	5,500- 6,000	25

NASSAU COUNTY

Map No.	Development	Price Range	No. of Homes Built	
			1939	Total
1.	North Shore Acres (W. Uhl, H. L. Carey), Glen Head.....	\$4,000- \$ 8,500	20	35
2.	Montfort Hills Homes (Theo. M. Lay), Port Washington.....	7,000- 10,000		25
3.	Harbor View Homes (C. P. Standing), Glen Head.....	5,000- 6,500	15	25
4.	North Shore Park Homes, Great Neck.....	6,000- 7,000	10	35
5.	Saddle Rock Estates (Robt. J. Rose), Great Neck.....	8,500- 13,000	20	100
6.	New Salem (Williams-Harter Corp.), Port Washington.....	7,000- 10,000	66	200
7.	Chester Hill (W. Busch), Manhasset.....	7,000- 12,500	10	50
8.	Mott Bros. (H. B. Mott), Flower Hill.....	6,500- 10,000	30	50
9.	Lake Success, & Flower Hill, Newell & Daniel (Porter Daniel).....	8,500- 14,900	50	60
10.	Walter Uhl, Flower Hill.....			25
11.	Norgate (G. A. Mezger), Roslyn.....	8,450- 18,000	30	100
12.	Shorehaven (H. L. Loshen), Manhasset.....			70
13.	Strathmore (Wm. Levitt), Manhasset.....	8,500 up	225	400
14.	Wyngate (Patrick J. Callan), Gr. Neck.....	7,450- 18,000	100	100
15.	Woodedge, Westbury.....	6,000- 7,000	3	50
16.	Droesch Homes (Frank Droesch), Westbury.....	6,800- 12,000		25
17.	Droesch Homes, New Hyde Park.....	3,490- 6,500	165	200
18.	Wade Homes, New Hyde Park.....	4,000- 5,000		25
19.	Zenith Homes (Paul Fager, New Hyde Park.....	4,000- 5,000		65
20.	Old Colony Lane Homes, Great Neck.....	7,000- 8,000	3	50
21.	Lakeville Estates (Mishkin), New Hyde Park.....	3,250- 5,000	30	350
22.	Hillside Heights (R. W. Duggan), New Hyde Park.....	3,500- 5,000	150	400
23.	Hillside Park Oaks (Sam Harris), New Hyde Park.....	4,000- 5,250		25
24.	Hillside Tuxedo (Stewart Burkland), New Hyde Park.....	3,250- 5,000	18	25

(Continued to page 156)



BRICK MORTAR

Banner OFFERS YOU

WATER TIGHT JOINTS

plus

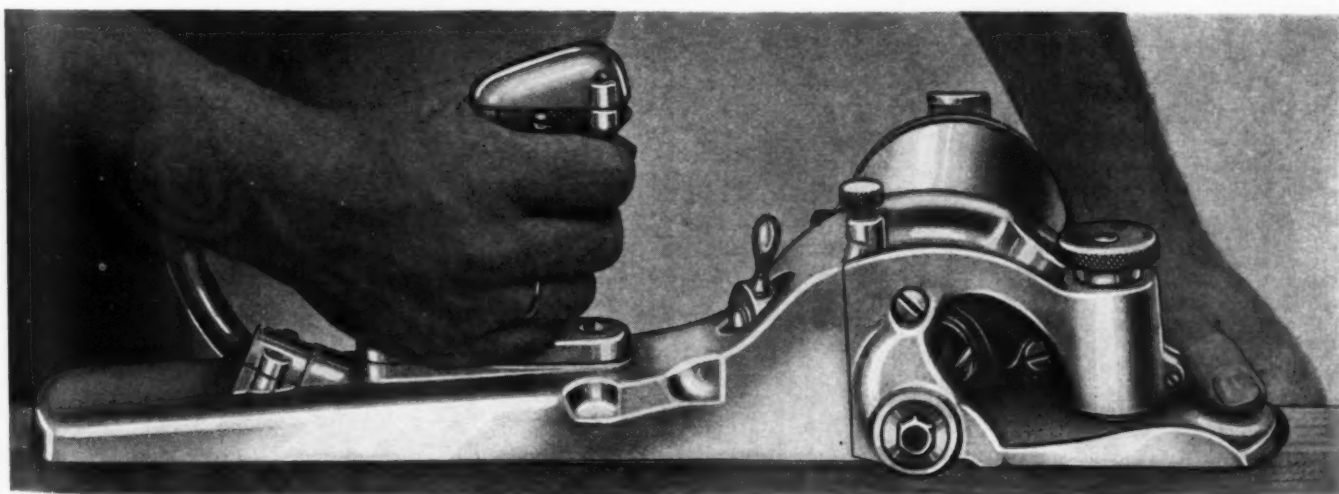
THESE EXTRA POINTS!

- WORKABILITY
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- Cushioning Action
- LESS SHRINKAGE
- DURABILITY
- TESTED QUALITY

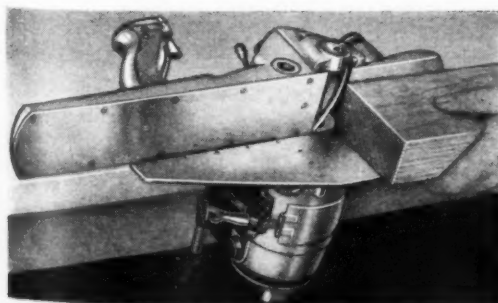
BY THE MAKERS OF *Banner Lime*

Write for Descriptive Booklet and
FREE SAMPLE PLAN
Effective only during April

NATIONAL MORTAR AND SUPPLY CO.
GRANT BUILDING PITTSBURGH, PA.



SAVE TIME..MAKE MONEY



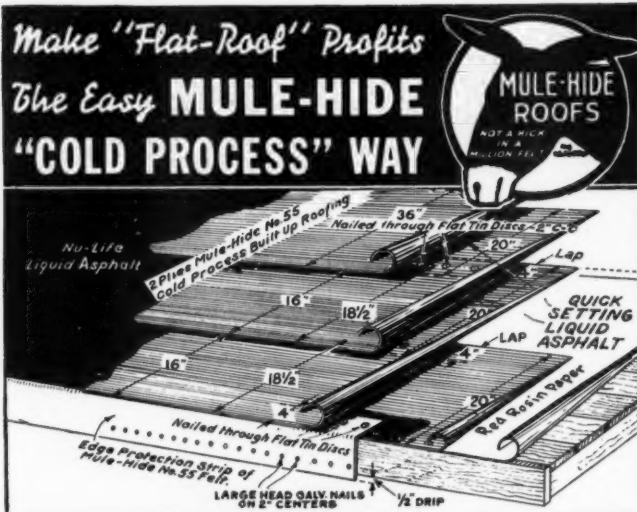
COMPLETE WITH BENCH BRACKET

The J5 can be rapidly set up in this Bench Bracket and used as a high speed jointer, for inside trim and other planing jobs.

Fitting, Beveling Doors, Sash, Storm Windows, Screens, Transoms!

The biggest capacity Portable Electric Plane on the market, the Carter J5 will plane surfaces up to 2 1/2" wide — in a fraction of the time required for hand planing! Spiral cutter turns 18,000 r.p.m., leaves smooth, true surface. Makes straight or bevel cuts to 45°. Quickly set for any depth cut to 3/16". The J5 will pay for itself on one big job! Write for literature and demonstration. **R. L. Carter Division, The Stanley Works, 133 Elm St., New Britain, Connecticut.**

CARTER MONEY MAKING TOOLS



Quit passing on the profits on Flat Roof jobs to others. This simple drawing shows every step in applying a Mule-Hide Cold Process Built-Up Roof. No expensive equipment needed — just a hammer, knife, brush, and yardstick. Precision-made, factory-inspected materials eliminate all "mystery" and guess-work. You can bid lower and make real money. A tested and proved method—millions of square feet now in use.

YOU CAN GET THIS BUSINESS IN YOUR TOWN

Stores, Offices, Hotels, Theatres, Factories, Dairies, Laundries, Garages, Warehouses... wherever a "Built-Up" is needed.

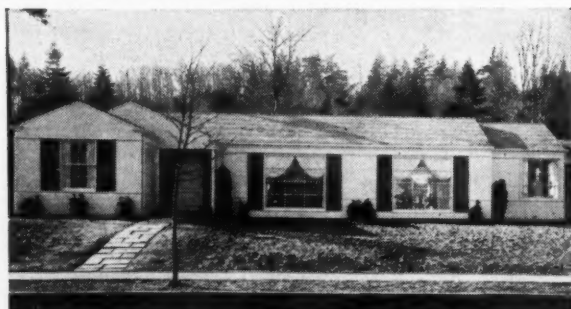
Send for Illustrated Specification Manual and Prices.



250 Largest Long Island Developments

(Continued from page 155)

Map No.	Development	Price Range	No. of Homes Built	
			1939	Total
25.	Williston Homes (Chas. J. Rorech), Williston Park	3,500- 5,000	20	50
26.	Mott Bros., Garden City	7,500- 12,500		400
27.	Delano Park (Terrenova), East Hempstead	3,500- 5,500	15	50
28.	East Hempstead Homesteads (Chas. J. Rorech), E. Hempstead	4,890- 7,000		100
28.	Goodrich Homes (Chas. J. Rorech), W. Hempstead	4,500- 7,000		60
29.	Frafell Homes (Frank J. Fellows), Uniondale	3,990- 4,500	50	100
30.	Alden Homes, Hollis	4,000- 5,200		170
31.	Jefferson Homes (Max Jaeger), Elmont	3,690- 5,250		50
32.	Paul Baur & Son, Franklin Square	3,700- 5,500		25
33.	Franklin Square Homes (D. Teicholz), Franklin Square	4,000- 5,500		250
34.	Linsquare Bldg. Corp. (Harold Kaplan), Franklin Sq.	4,000- 5,500		50
35.	Skillman Homes (Benj. Biegeleisen), Franklin Square	3,400- 5,000		75
36.	Bradley Homes (Max Hirschorn), Franklin Square	4,500- 5,500		25
37.	Franklin Square Manor (Stitch & Bailey), Franklin Sq.	3,400- 5,000		50
38.	Miller-Fairbanks (Andrew N. Miller), Franklin Square	3,400- 4,500	25	100
39.	W. Hempstead Manor (Janos & Lester), W. Hempstead	5,790- 6,790		50
40.	W. Hempstead Oak (Frank Fellows), W. Hempstead	4,500- 6,500		120
41.	Garden City Manor (Wydler Bros.), Munson	4,250- 6,000		25
42.	Jessberger, Malverne			75
43.	Malverne Park Gardens (Sam Harris), Malverne	6,500- 9,000		75
44.	Wynn Homes, Malverne	5,500- 7,500		25
45.	Hempstead Park Acres, West Hempstead	7,000- 13,000	30	50
46.	Stewart-Berdick, Valley Stream	3,000- 4,000		55
47.	Stratford Homes (Stratford Bros.), Valley Stream	4,000- 5,000		100
48.	McDermott Homes (Arthur McDermott), Valley Stream	5,500- 7,500		50



Laux finished all-plywood "Puget Sound House" in exclusive Sheridan Heights, suburban Seattle.



Living room of the Puget Sound Model Home, shown above, beautifully finished with PLASTEREZ.

LAUX "PLYWOOD ACCESSORIES" were created for DRY-WALL CONSTRUCTION



YES! Dry-Wall construction *does* call for specialized finishing materials. To our knowledge, Laux Rez Line is the only line of paint products developed in close cooperation with plywood engineers. The Rez Line—Laux Rez, White Rez, Plasterez, Rezitex—meets every plywood finishing need. Laux-finished interiors, exteriors make new friends at every turn.

Learn more about the Rez Line and its application in modern dry-wall construction. Send for the free Laux Manual that gives start-to-finish dry-wall specifications. Write for your copy, today. Address Laux Sales Co., 310 Maritime Building, Seattle, Washington.

LAUX SALES COMPANY

SEATTLE.....911 Western Avenue
LOS ANGELES.....859 East 60th Street
CHICAGO.....6 N. Michigan Avenue
MINNEAPOLIS.....2510 University Ave., S. E.
HOUSTON.....2812 Center Street
DALLAS.....307 Great National Life Bldg.



49. Schlossman Bros., Valley Stream.....	5,000- 7,500	75
50. Stately Oaks (F. G. Chalmers), Valley Stream.....	6,000- 7,500	15 40
50. Dover Park (Bruggeman & Schafer), Valley Stream.....	5,000- 6,000	50 50
51. Westwood Gardens (W. L. Donovan, Jr.), Valley Stream.....	4,250- 7,000	30
52. Lynbrook Gardens (Sokolov), Lynbrook.....	5,000- 6,000	40
53. Rental Housing: Twin Oaks Lodge.....		21 apts.
54. Canterbury Homes (Jaeger Bros.), Rockville Centre.....	8,000- 12,000	40
55. Knollwood (Sokolov), Rockville Centre.....	6,000- 8,500	40
56. Four Star Homes (Zarett), Baldwin.....	5,000- 6,500	60
57. Krown Homes (Louis Krown), Baldwin.....	4,500- 6,000	75
58. Loft Estates Homes (Geo. A. Loft & Gustav Svenson), Baldwin.....	7,500- 11,500	40
59. Sweet Briar (Albert Oshrin), Baldwin.....	5,000- 6,500	25
60. Baldwin Terrace, Baldwin.....	4,000- 5,000	25
61. Foxhurst (Albert Oshrin), Baldwin.....	4,000- 6,000	40
61. Freeport Acres (J. Walsh), Freeport.....	8,500	
62. Riordan, Roosevelt.....	4,000- 5,000	30
63. Fair Oaks (Kraushaar), Woodmere.....	7,000- 8,500	20 75
64. Merokee Homes (Strangfeld), Merrick.....	4,500- 6,000	25
65. Causeway Homes (F. J. Colan), Merrick.....	4,000- 12,000	90
66. Harkay.....		25
67. Harbor Green, Harmon Realty Co., Massapequa.....	6,000- 8,500	50
68. Biltmore Shores, Massapequa.....	4,000	25
69. Green Acres (Irwin Chanin), Valley Stream.....	5,500- 6,000	100
70. Nu-Way Homes (Sam. Weisbart), Valley Stream.....	4,700- 5,500	60
71. Gibson Homes (Wm. R. Gibson), Gibson.....	5,500- 6,500	100
72. Fair Oaks (P. Kraushaar), Cedarhurst.....	6,000- 7,500	25
73. Sunbury (W. R. Gibson), Hewlett.....	5,000- 6,500	50
74. Lynbury (W. R. Gibson), Hewlett.....	5,000- 6,000	15
75. Lynbrook Park (H. Klein), Lynbrook.....	5,500- 6,500	25
75. Ideal, Lynbrook Estates (J. D. O'Connell), Lynbrook.....	5,000	300
76. Union Park (W. Stewart), Lynbrook.....	6,000- 7,000	25
77. Eberlein Homes (Eberlein Bros.), Lynbrook.....	5,000- 6,500	55
78. Klein Estates (H. Klein), E. Rockaway.....	5,500- 7,000	25

WHAT? COPPER PROTECTION IN A LOW-COST HOME?

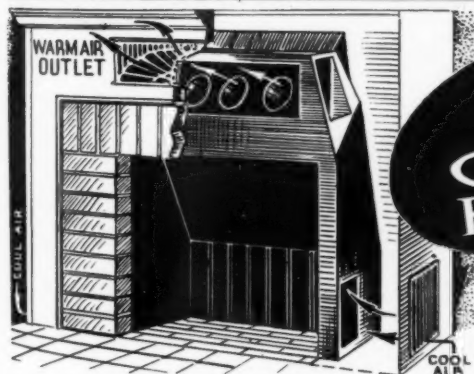
WHY, OF COURSE! ANY BUILDER CAN AFFORD TO USE

COPPER ARMORED SISALKRAFT

Write . . . For a sample and full details. The enduring protection of copper — as easily applied as paper — and priced in reach of EVERY builder.

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205 W. Wacker Drive Chicago, Illinois
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INCREASE YOUR FIREPLACE PROFITS



Pat. No. 1,987,252—Other patents pending.

IT IS EASY TO BUILD A SUCCESSFUL FIREPLACE AROUND A SUPERIOR HEAT CIRCULATOR

The Superior Heat Circulator is a complete form (from hearth to flue) built with proper angles and dimensions around which any design fireplace can be built.

SUPERIOR FIREPLACES COST BUT LITTLE MORE THAN THE ORDINARY FIREPLACE

The Superior Circulator consists of the firebox, smoke dome and built-in damper. This saves fire-bricks and labor required to construct the firebox and throat of the ordinary fireplace.

SUPERIOR FIREPLACES DELIVER MORE HEAT

The Superior Circulator is constructed on same principle as a warm air furnace. The air chambers around the firebox and smoke dome absorb and circulate through the home approximately 60% of the heat lost up the chimney by the ordinary fireplace.

Sell SUPERIOR FIREPLACE HEAT CIRCULATORS

Best by Test!

- They deliver a higher percentage of heat because the air chambers surround the firebox, smoke dome and throat. This adds approximately one-third more heating surface per size unit than other types of circulators with air chambers around firebox only.

- They Circulate a larger volume of air and maintain a more uniform temperature because the cool air inlet and warm air outlet passages designed in the circulators are approximately three times larger than those used by most other fireplace circulators.

- They have no dead air pockets because of a series of air-heating flues through the throat which provide an air passage from lower to upper heating chamber, thus assuring free air passage over all heating surfaces, including lower back of the firebox.

- They give longer years of service than other makes because the firebox is heavily reinforced and the back-wall is constructed of 3/16" rust-resisting boilerplate iron and the larger flow of air through the heating chambers helps prevent the metal from overheating and deteriorating.

- They are designed and manufactured by the pioneers of the industry—nineteen years of concentrated engineering thought have achieved the Superior Circulator.

- They are in use in thousands of homes in all climates. They were selected on their merits by the Federal Housing Authority—1,145 circulators now being installed as the only heating facility in one of the major southern projects.

Immediate shipments from Warehouses or Distributor's Stock at convenient points.

Write for: 46-page Fireplace Plan Book showing 50 fireplace designs and 30 four- and five-room floor plans for one- and two-story homes and cabins and how to heat them with one Superior Fireplace.

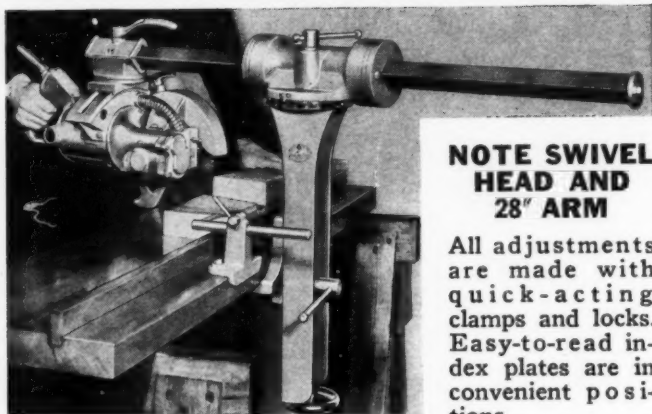
SUPERIOR FIREPLACE COMPANY

1046 South Olive Street

Los Angeles, California

Manufacturers of wood, coal, and gas fired fireplace circulators.

MULTISAW ARM *PAYS* FOR ITSELF ON TWO HOUSES



NOTE SWIVEL HEAD AND 28" ARM

All adjustments are made with quick-acting clamps and locks. Easy-to-read index plates are in convenient positions.

THE NEW MULTISAW ARM, teamed up with a Power King Saw, pays out quickly by putting your sawing on a production basis—on the job or in the shop. Portable, quickly and easily set up for rip, cross cut and mitre, either straight or bevel—ideal for scoring of brick, stone and tile. Cross cuts, rips, mitres, etc. Slide bar mounted on eight sealed ball bearings has 28" stroke. Swiveling head accurately graduated 0 to 60° either direction. Elevation adjustment 9". Takes any POWER KING Saw 8" to 11" inclusive.

It pays to buy equipment that will pay for itself. Write for Bulletin.

POWER KING TOOL CORP.

DEPT. AD

WARSAW, IND.

LETTERS from Readers on All Subjects

Facts, opinions and advice
welcomed here

Finds Ad Pages Valuable

New York, N.Y.

To the Editor:

The November 23, 1939 issue "Engineering News-Record" contained the following signed communication:

"Sir: It is obvious to most subscribers to trade and technical periodicals that the publication cost of an issue is many times the subscription price. The difference between cost of production and receipts from subscriptions is met by the income from advertisements. Whatever merit our technical magazines possess, in fact their very existence, is largely due to those who advertise therein.

"It is said that the reading matter of the advertisements in engineering papers is 99 per cent truthful. These advertisements have a definite educational value which is attested to by the fact that the best technical libraries bind the advertising sections of leading periodicals in separate volumes and give them a place on the shelves.

"Every reader of a technical paper should read the entire advertising section. The writer has adhered to this practice with beneficial results for over half a century.—Robins Fleming, Structural Engineer, (retired)."

It occurs to me that something of this kind might well appear not only in the Editor's pages, but also might be emphasized periodically on the Publisher's page of any publication.

Along with this I suppose all of us editors should be encouraged and stimulated to make our advertising pages as worthwhile as the Editor's pages.

UNIVERSAL ATLAS CEMENT CO.,
M. A. Berns, Publicity Manager.

The
lime
that's
packed
in
Zig Zag
Bags



SIXTH CHURCH OF CHRIST SCIENTIST, DETROIT

Architects: George J. Mason Co., Detroit. General Contractors: F. H. Martin Construction Co., Detroit. Plaster Contractors: Service Art Plastering Co., Detroit. They used Hawk Spread White Finish (made from the same materials and by the same processes as Ohio White Finish.)

Fine plaster work requires lime of *uniform* quality -- fresh, fat and fluffy. Insist on Ohio White Finish or Hawk Spread White Finish. They come in **Red Zig Zag Bags**. Write for booklet about finishing lime.

The Ohio Hydrate & Supply Co., Woodville, Ohio

Manufacturers of: Ohio White Finish • Hawk Spread White Finish • Ohio Ritewall Fibered Lime Plaster • Ohio Sanlime Finish • Mastite Masonry Mortar • Ohio Masons Lime • Ohio Ground Lime.

Three Research Projects

Buffalo, N.Y.

To the Editor:

Last spring I asked two thousand research men in five countries, "What will be the outstanding contribution from YOUR field of research during the next three years?" I have now ventured into another phase of this subject and have already received replies from many of America's important industrialists to the question, What new products, processes or materials might industrial research develop that would be valuable to your industry?

From the first survey we determined what the research man was developing for industry. From the second we hope to develop what the industrialist would like the research man to develop for him. For instance, the manufacturer of vacuum cleaners would like an inexpensive metal to turn out a lighter weight product, thereby easing the burden of the housewife. With several thousand manufacturers later reading these wants, some of them are bound to be satisfied, and American business to that extent, at least, will be stimulated.

To complete this survey, I am putting the same question to you as head of one of America's important technical journals and I shall appreciate the benefit of your thoughts.

LIBERTY BANK OF BUFFALO

By Bert H. White, Vice President

ANSWER:

The building industry, as well as building owners, would be greatly benefited if there could be successful industrial research to develop

1. A non-rusting and non-staining sheet metal of reasonable cost, good strength and good workability.
2. A non-leaking and permanent mortar or joint adhesive for masonry units.
3. A non-shrinking, non-swelling treatment for lumber for construction.

The above represent fundamental weaknesses in materials widely used and generally available to the building industry which result in short service life and heavy maintenance expense on all buildings subjected to the extremes of North American weather.—EDITOR.

(Continued to page 160)



Homes Sell Quicker With Patterson Venetian Blinds

A home equipped with Venetian Blinds has much greater sales appeal—and when the blinds are Patterson Rigid-Metal that appeal is heightened by the quality impression which they create. Your prospective home-buyer will be doubly interested to learn that these blinds

never have to be scrubbed.

These blinds are beautifully designed, expertly built. Operate with exceptional ease. Eight different colors. Last indefinitely.

Mail the coupon for complete information on Rigid-Metal and our other blinds—Patterson *Alumilite, wood and Plastone.

*Patented process owned by Aluminum Company of America

PATTERSON VENETIAN BLIND CORPORATION

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Patterson Venetian Blind Corporation
1142 N. Meridian St., Indianapolis, Ind.
Send full details on Rigid-Metal and your full line of blinds.

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CAULK all Joints WITH PECORA COMPOUND



Build a house, caulk the window and door frames with Pecora—and you've done something to impress the prospective owner. Pecora-protected houses use less fuel, maintain more uniform temperatures, are less subject to drafts and moisture leaks. You can't buy a better caulking material than Pecora. Available in bulk and in cartridges.

Write for illustrated folder

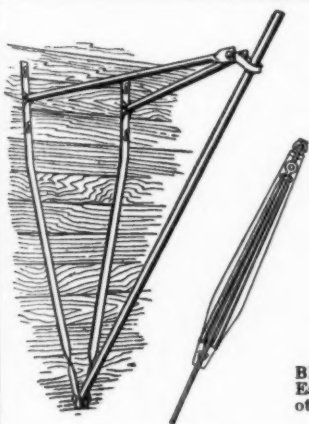
Pecora Paint Company, Inc.

Member of Producers' Council, Inc.
Established 1862 by Smith Bowen

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ALSO MORTAR STAINS • SASH PUTTIES • ROOF COATING
• PECOMASTICS FOR STRUCTURAL GLASS INSTALLATION



CUT COST OF SCAFFOLDING IN HALF

RELIABLE Steel Scaffold Brackets can be used on wood or stucco with perfect safety. Remember: A safe workman is a good workman.

BRACKET FOLDS compactly. Easy to remove and erect on another job. Far less bulky to handle.

Speed Up BUILDING and PAINTING

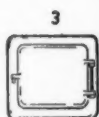
In the last 30 years thousands of Builders and Painters have PROVED that Reliable Scaffold Brackets cut scaffolding costs in half, last for decades and are many times SAFER. RELIABLES are easy to erect and remove—leave no holes to be plugged. Amazingly superior in every way to wooden scaffolding. You owe it to yourself to know all about these remarkable brackets.

WRITE TODAY for complete literature.

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RELIABLE
SCAFFOLDING BRACKETS

• KEWANEE • METAL BUILDING PRODUCTS



Long specialization in the construction of Metal Building Products enables Kewanee to bring you the finest in this field . . . at prices tuned to steady sales in 1940. Listed here are some of the items in our line of modern, practically designed Metal Building Products.

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|-------------------------------|------------------------------|
| 1. Utility Window | 8. Fireplace Damper |
| 2. Basement Coal Chute | 9. Package Receiver |
| 3. Clean-Out Door | 10. Garbage Receiver |
| 4. Mail Chute | 11. Pivoted Window |
| 5. Casement Window | 12. Basement Window (Master) |
| 6. Basement Window (Standard) | |
| 7. Projected Window | |

If you don't have a new No. B-40 Kewanee Catalog, we'll gladly send you one on request. It will pay you to order from it regularly. Kewanee prices are low—quality high.

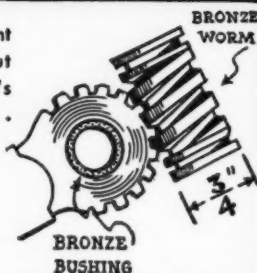
KEWANEE MANUFACTURING COMPANY
1644 Burlington Avenue Kewanee, Illinois



Only Win-Dor Has $\frac{3}{4}$ " naval bronze worm (not undersized steel,) but bronze working against a machine cut gear of high carbon steel, (not die cast). Compare these critical parts before you buy.

LOOK INSIDE THE CASE It's the works that count

Don't buy casement hardware without knowing what's inside the case . . .



FOLLOWING the pattern established by Win-Dor years ago, most casement window operators LOOK alike, but there's a deal of difference in the operator mechanism. Just as there's a great difference in watch movements.

Under the triple strength housing of Win-Dor operators you will find features exclusive with Win-Dor; the largest bronze worm in any operator, at no extra expense, reinforced arm, machine-cut solid gear. During Win-Dor's quarter century of experience in casement window hardware these things have become paramount to Win-Dor quality, to years of satisfying, trouble-free service.

Below is illustrated Win-Dor Series 26 Operator a quality product that will never "let you down."



THE CASEMENT HARDWARE CO.
408C N. Wood Street, Chicago, Ill.
GENTLEMEN:

Send me literature on your hardware and name of nearest dealer who can show it to me.

NAME _____

ADDRESS _____

LETTERS—

(Continued from page 159)

Canadian Co-operation

Timmins, Ont., Can.

To the Editor:

I have just read, with great interest, Mr. Northup's article on \$1.00-a-day homes and am imposing upon you for further information.

Your most informative trade magazine, *American Builder*, has just come to my attention and after carefully reading your February issue I feel that much more has gone before in the matter of small home development.

I have made arrangement with the newsstand to get all future copies but would like the past copy in which low cost methods of construction are described, particularly the joistless wood plank floor.

If I may, I would like particulars of the National Small Homes Demonstration, Inc., and a copy of the "Sales Tools" as outlined on page 125. I understand that this promotion is sponsored by the organized lumber trade in the U.S. Is there any way in which we could co-operate or make use of the plan in our Canadian market? Our president, Mr. Leonard Hill, is past president of the Ontario Retail Lumber Dealers' Association and has strongly advocated aggressive merchandising methods through that body. I know he will be interested in your 1940 program.

HILL-CLARK-FRANCIS, LTD., General Contractors,
By Wm. C. Wingrove, Advertising Manager.

"Ideas" Offered Home Builders

Portland, Ore.

To the Editor:

The Candland Company has recently opened a "Home Building Idea" branch of its housing finance organization at 3138 N.E. Sandy Boulevard, Portland, Ore.

The purpose of this branch office is to place information concerning building of homes within easier reach of the public. The office hours are 9:00 a.m. to 9:00 p.m. Monday through Friday, and 9:00 a.m. to 5:00 p.m. Saturday.

EXTRA INCOME FOR YOU Surfacing Business



Renew and beautify old buildings. Make new construction more permanent and attractive. Plastic Colorcrete fuses with any masonry surface. It fills all checks and can be applied in any thickness and in 30 colors and shades; fully proven by over 13 years of actual use under all conditions and every climate.

BIG EARNINGS

Owners everywhere want to enhance present values. With this new machine you can supply this big waiting market with permanent Colorcrete at an amazingly low cost. Operators report costs of 2c and up per square ft., and sell up to 7c per sq. ft. Some have paid for their equipment from the first few jobs.

Machine capacity up to 1,000 sq. ft. per hour. Get the facts. Colorcrete books tell the whole story. Write today, it may mean big extra income for you.

COLORCRETE INDUSTRIES, INC.
590 Ottawa Ave. Holland, Michigan

An important function of this new office, in co-operation with architects, building material dealers, etc., is to furnish the public with ideas relative to floor plans, exteriors, kitchen and bath arrangements, and to maintain a complete library of books and current periodicals dealing with homes. This library is open to anyone interested, and we do not have salesmen in the office. However, our representatives are available for consultation without obligation at any time.

We have the February issue of *American Builder* in which appears the article "\$1.00-a-Day Home Is 1940 Goal," and the work of the National Small Homes Demonstration, Inc. Our program is along the same line as that described in this article, and we are interested in securing any available material on small homes. We note that the National Small Homes Demonstration, Inc., has miniature model homes for office and window displays. Our new office has sufficient floor space for several attractive displays, and we will appreciate any information you can give us as to how we may obtain the models and any other material that would be of value in our library.

THE CANDLAND COMPANY
By Keith A. Neilson, Manager, Branch Office.

Front Cover Home

Rochester, N.Y.

To the Editor:

The picture of the home on the cover of your February issue of *American Builder* we are using as an illustration of inefficient insulation. It definitely shows a stack action and heat loss on the sides and walls of this house, with the way the snow has melted back at these points. It is a very good picture of how much heat is lost in many types of so-called insulated homes.

C. STORRS BARROWS, Architect.

A Report from Washington

Washington, D.C.

To the Editor:

In chasing around these statistic-compiling government offices, where all manner of high class (speaking educationally wise) (Continued to page 166)

Practical Accounting and Cost Keeping for Contractors

This practical book describes the easiest and best methods of keeping all kinds of contractor's records, time keeping, cost keeping, bookkeeping, Social Security records, estimating forms, etc. It illustrates and explains book-keeping systems for the smallest builder or the largest general contractor. It shows how to keep costs on the job and in the office, how to prepare intelligent estimates, and how to draw up contracts and sub-contracts.

170 pages, 300 illustrations, 8½ x 11½ inches, cloth, \$2.50.

Hogg's Wage Tables for Building Contractors

This handbook prevents mistakes and saves time when figuring pay rolls. There is a complete set of wage tables worked out by quarter hours for any length of time from 1 to 60¾ hours, and every wage rate from 30 cents, increasing by 2½ cents per hour, to \$2.25 per hour. It also includes all odd rates, such as \$.68¾. You simply refer to the table showing the rate per hour and then follow down to the nearest quarter hour.

190 pages, 4½ x 6½ inches, thumb-indexed, flexible, \$2.50.

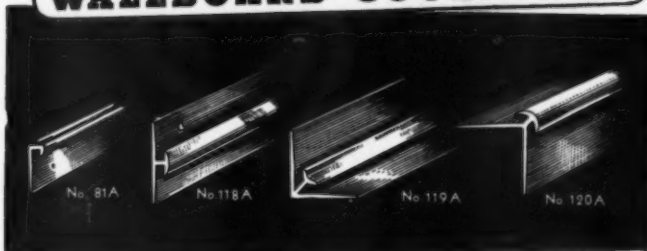
BOOK SERVICE DEPARTMENT

AMERICAN BUILDER and BUILDING AGE

30 Church Street

New York, N. Y.

METAL TRIMS FOR ALL WALLBOARD COVERINGS



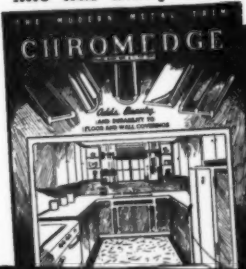
CHROMEDGE

*Trade Mark Reg. U.S. Pat. Off.

In the Chromedge® line you'll find a variety of lustrous trims for any covering material. Lip sizes from 1/16 to 3/4 inch! Trims that exactly fit plywood, Masonite, hard-board, wall tile, and all gauges of linoleum, rubber and other composition materials. Every trim is designed for easy installation, and best results. And the Chromedge® line has many other superior features! All cap trims, for example, have both round and slotted holes in securing flanges—ready for either "fixed" or "lap-down" installation. Get full details . . . send for your free copy of the 1940 Chromedge® catalog.

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340 DIFFERENT TRIMS!
The RIGHT Trims for every Installation. Write Today!



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OFFICE AND FACTORIES: COLUMBUS, OHIO

SAVE 50% or More of FINAL COSTS on WOOD FLOOR FINISHING WITH LIGNOPHOL

LIGNOPHOL costs less than one cent per square foot. It is applied in one coat with a long handled brush—reducing labor to the minimum. The U. S. Forest Products Service says linseed oil does not even protect and—you know shellac and varnish are surface treatments that wear off.

WHEN YOU USE LIGNOPHOL THERE IS NOTHING TO WEAR OFF

Its ONE application gives smoother, harder, more attractive floors. Thousands of contractors are finding the LIGNOPHOL method of preserving and finishing floors (and trim) at 50% or more savings, the modern way to more profits and greater job satisfaction.

Find out more about advantages of

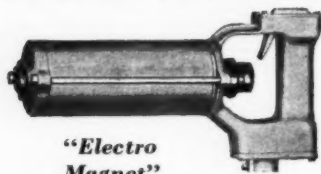
LIGNOPHOL

MAIL THIS COUPON TO-DAY!
Dept. 84, L. Sonneborn Sons, Inc., 88 Lexington Ave., New York City
NAME _____ ADDRESS _____ CITY _____ STATE _____

SYNTRON

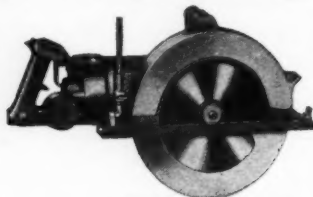
REG. TRADE MARK

ELECTRIC TOOLS



"Electro Magnet"
HAMMERS

For Drilling, Cutting,
and Dressing Concrete



"High Torque"
POWER SAWS



"High Speed" **CONCRETE VIBRATORS**

Syntron Tools carry two reputations—and are known by contractors all over the world—

First: As tools that can be depended upon to work through the job without breaking down.

Second: As labor savers that will pay for themselves on the first fair sized job.

Write for new booklet illustrating many ways
these tools speed up jobs and save money

SYNTRON COMPANY

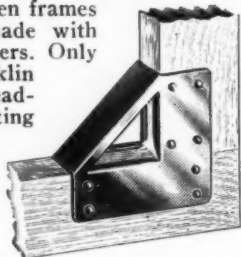
295 Lexington Ave.

Homer City, Pa.

MICKLIN METAL CORNERS

REINFORCED SAGPROOF CONSTRUCTION

Reinforced sagproof window screen frames and screen doors are easily made with self-squaring Micklin Metal Corners. Only a hammer and saw needed. Micklin Metal Corners are made of lead-coated steel, which is rust resisting and takes paint without priming. The position of the nails is indicated and the nails are driven through the metal. This countersinks the nails flush with the metal. The nails supplied will never loosen or split the wood.



Dual Corner

MICKLIN DUAL CORNERS

Reinforce both sides of the wood. The diagonal channel base permanently prevents sagging.



Single Corner

MICKLIN SINGLE CORNERS

Provide a quick and easy repair for loose, sagging frames. Applied to the back of the frame without removing wire or other facing.

Order a supply at once—to save labor and lumber on new construction and remodeling jobs.

Complete New Catalog just off the press. Write for free copy today.

Manufactured and sold exclusively by

W. J. DENNIS & CO.
2110-20 WEST LAKE ST. CHICAGO

Sources of Technical Literature

A major activity of trade associations includes the presentation and distribution of technical literature on uses of products or services of their members. Each of the following associations has available up-to-date, attractively-presented information that will be sent on request.

American Gas Assn., 420 Lexington Ave., New York, N.Y., has a booklet especially prepared for architects and builders which is devoted to the application of gas services to homes. Includes data on gas cooking, water heating, refrigeration, and house heating.

Arkansas Soft Pine Bureau, Boyle Bldg., Little Rock, Ark., has published a number of booklets on the uses of Arkansas Soft Pine for framing, flooring, interior trim, and paneling. Of special interest is the Builder's Handbook, containing factual data on stress loads, correct construction methods, and painting and finishing instructions.

Douglas Fir Plywood Assn., 301 Tacoma Bldg., Tacoma, Wash., has available extensive files of technical data on Douglas Fir Plywood grading, specifications, production, and uses, with booklets showing numerous new applications. Data includes suggestions on proper types of plywood for various uses, suggested thicknesses, grades, etc.

Fir Door Institute, Tacoma Bldg., Tacoma, Wash. New literature shows pre-fit, stock entrance doors, and describes the Association's commercial standards or grade marks for stock doors. Other literature describes a new line of upward-acting garage doors of Douglas Fir.

Lead Industries Assn., 420 Lexington Ave., New York, N. Y., has available booklets and technical data on the many protective, decorative, and structural uses of lead products in all types of structures, with particular attention devoted to the value of white lead for interior and exterior painting.

Maple Flooring Mfrs. Assn., 332 S. Michigan Ave., Chicago, Ill. Technical literature available defines and illustrates grades of flooring, and tells the purposes for which each is best suited, with data on durability. Gives suggestions for proper laying, finishing, and decorative effects possible in various kinds of applications.

National Coal Assn., 307 N. Michigan Ave., Chicago, Ill.—804 Southern Bldg., Washington, D.C., has available a Modern Basement Plan Book showing proper locations of driveways, coal bins, and heating plant in coal-heated homes with and without basements. Portfolio includes construction details of modern enclosed coal bins of lumber, plywood, concrete, and masonry tile, and suggestions for the construction of sloping-floor bins; also suggestions regarding cement basement floors and basement painting.

National Lumber Mfrs. Assn., 1337 Connecticut Ave., Washington, D.C., has available full engineering and other technical data on the use of lumber for all types of building construction; also a series of booklets dealing particularly with the use of lumber in residential construction and in low-cost homes. The Association is also headquarters for lumber statistical information.

National Oak Flooring Mfrs. Assn., Derron Bldg., Memphis, Tenn., has prepared booklets and folders on oak and other principal types of hardwood flooring, with grading rules and specifications. Other literature includes suggestions for laying and finishing oak, beech, birch, hard maple, and pecan floors in homes and in commercial and public buildings.

Portland Cement Assn., 33 W. Grand Ave., Chicago, Ill. Research laboratories are constantly at work on improvements in the use of portland cement and concrete. Technical and non-technical literature is available on the mixing, placing, forming, finishing, and reinforcing of concrete; also on the use of concrete products for homes and structures.

Red Cedar Shingle Bureau, White Bldg., Seattle, Wash., has literature on the grade marking of Certigrade Red Cedar Shingles. Plans and pictures of low-cost Certigrade homes are available. Literature includes data on proper laying of wood shingles on side-walls and roofs, and suggestions for remodeling.

Shellac Information Bureau, 70 Pine St., New York, N. Y., has available technical information on the serviceability and advantages of shellac for preserving the finish of floors.

Southern Pine Assn., Interstate Bank Bldg., New Orleans, La., has prepared a Manual of Standard Wood Construction (an engineering text book), an Architects Specification Manual, and other technical publications dealing with the correct specification and use of Southern Pine lumber.

West Coast Lumbermen's Assn., 364 Stuart Bldg., Seattle, Wash., has a Manual of Precut Framing for light frame walls, a Douglas Fir Use Book and technical grade-use literature on Douglas fir, Sitka spruce, West Coast hemlock and Western red cedar.

Western Pine Assn., Yeon Bldg., Portland, Ore. Literature includes data on the size and scope of the industry, with descriptions of the many uses of Western Pine in construction. Special booklets show applications in home construction and farm buildings, with suggestions for installing and finishing knotty pine interior paneling and economy siding.

Wood-for-Venetians Assn., Russ Bldg., San Francisco, Calif. New literature shows attractive exterior and interior views of homes illustrating how wood venetian blinds harmonize with wood furniture, walls and trim.

CLASSIFIED DIRECTORY AND BUYERS' GUIDE

Listing the Manufacturers of Materials and Equipment Used in Building

THIS Classified Index and Buyers' Guide is arranged from A to Z according to NOUN names.

Under each classification the names of manufacturers appear alphabetically, followed by their address or by the page number on which their advertisement appears in this issue of the *American Builder*.

The manufacturers listed below will be pleased to furnish complete information on any product that appears

in connection with their names, although they may not be advertising those particular products in this April number. Do not hesitate to write them to forward catalogues, prices and the names and locations of their nearest dealers.

To find the manufacturer of an article under a special Trade Name or brand look for the Trade Name desired in the alphabetical list immediately following this Classified Index.

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Solvay Sales Corp., 40 Rector St., New York, N. Y.	
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Autovent Fan and Blower Co., 1809 N. Kostner Ave., Chicago, Ill.	
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Forest City Foundries Co., 2500 W. 27th St., Cleveland, Ohio.	
General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J.	
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Farley & Loetscher Mfg. Co.	190
Master Metal Strip Service, Inc., 1720 N. Kilbourn Ave., Chicago, Ill.	

--- DUPLEX ---

FLAT SASH BALANCES

Adjustable and Pre-Adjusted Types
OVER 4,000,000 IN USE

DUPLEX INC. 634 N. La Peer Dr.
Los Angeles, Calif.

BANDSAWS—See Saws, Band	
BARN DOOR HANGERS—See Hardware, Barn Door	
BARN DOOR RAILS—See Rails, Barn Door	
BARN DOOR ROLLERS—See Rollers, Barn Door	
BARN EQUIPMENT—See Equipment, Barn	
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Shevlin Pine Sales Co., First National Soo Line Bldg., Minneapolis, Minn.	
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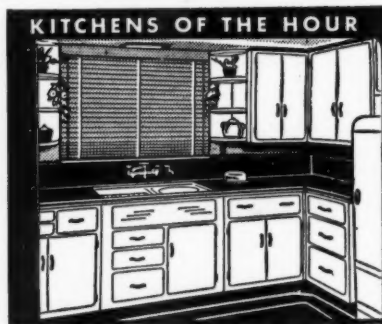
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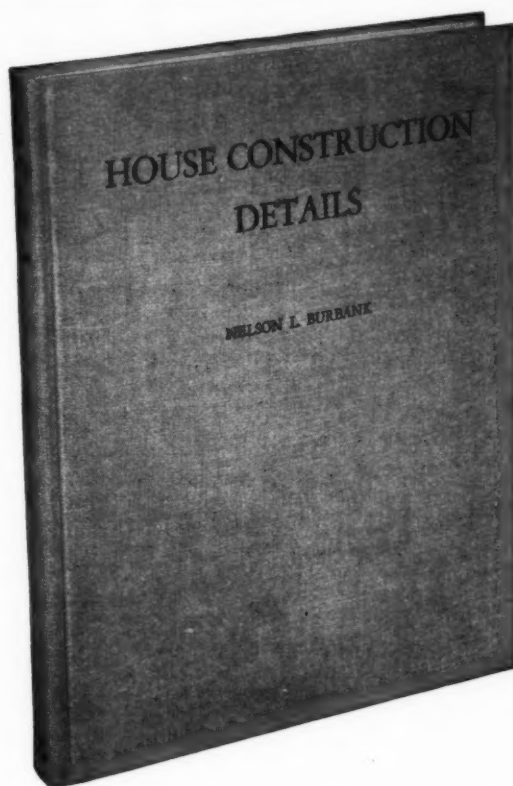
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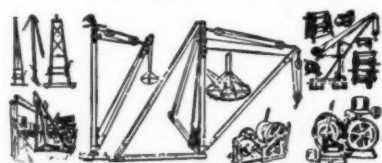
CHEE

CONTRACTORS' EQUIPMENT

C. H. & E. MANUFACTURING CO.
3848 N. Palmer St., Milwaukee, Wis.

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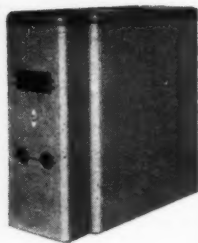
Sagen Derricks for every purpose
SAGEN DERRICK CO.
3101 Grand Ave., Chicago, Ill.

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PAYNE'S NEW ZONEAIR



Just a year ago this month the New Payne Zoneair was introduced to the gas heating field. Yet in that short time it has won countless friends from coast to coast.

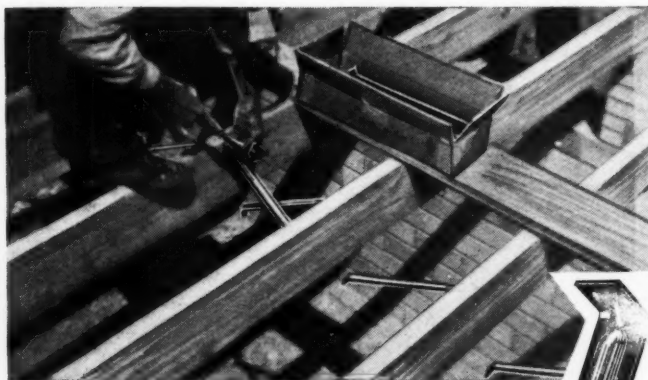
Why such outstanding, immediate popularity? Simply because the New Payne Zoneair offers, in a single, compact unit, all the functions of true winter air conditioning. It heats, circulates, ventilates, filters and humidifies—automatically!

Used individually to heat separate groups of rooms, it provides the added advantage of convenient, economical zoned warmth.

For information about the latest 1940 Model Payne Zoneair, see your local dealer or write the factory.

Payne

**FURNACE AND
SUPPLY CO., INC.**
Beverly Hills, Calif.



You Pay No Premium for Modern Steel Bridging

• The final cost of Union Metal steel bridging is no more—frequently less—than wood because it takes from $\frac{1}{2}$ to $\frac{1}{2}$ less time to install. This time saving is made possible because (1) entire supply of steel bridging for an average house comes in one conveniently carried carton; (2) it is quickly attached with roofing nails; and (3) eliminates replacement of splits.

Union Metal steel bridging can't warp or shrink, thereby eliminating cause of squeaky floors. Approved tests at leading engineering school prove this product stronger than standard 1" x 3" wood bridging.

Union Metal bridging is available in lengths to fit all regular joist sizes and spacings. Write for free sample, descriptive folder and prices.

Accepted
by
F. H. A.

THE UNION METAL MANUFACTURING CO.
CANTON, OHIO

LETTERS—

(Continued from page 161)

scientists are engaged in investigating everything from how to generate power from the fire of the firefly to what makes a mountain keep on mounting, I ran across a "statistic" or two which I thought might read well to those who get your valuable sheet.

Here is what I found, and this is true beyond a shadow of doubt: House sizes are decreasing, room sizes in houses and apartments are decreasing, in both size and number, as well as general use or purpose. Houses are less expensive because of these things. Maybe birth control may cut families to fit houses. Government entry into all manner of businesses seems to be affecting our existence. We are fast approaching the trailer-home.

You don't need me to tell you how all this affects the interest of your readers.

RILEY ELGEN.

Average Home Market?

Fort Dodge, Iowa.

To the Editor:

I was interested in your article regarding the homes sponsored by "Good Housekeeping." We subscribed to the first issue at a cost of \$32 but we did not subscribe to the second because, out of a list of twenty average prospects, we did not find a single person who could pay for the \$8,000 to \$12,000 "Good Housekeeping" home.

We feel that the plan in general is fine and we admire the purpose; but we do not think that they are selling the right priced house. I believe that it is a fact that 94 per cent of the towns in the U.S.A. are under 25,000 in population, and as Fort Dodge is 23,685 and we and our prospects can be considered as average, it seems that they are missing the big market.

Could you give us statistics on income division groups, number of houses built in the U.S. in a year, and the average price of these houses?

FORT DODGE LUMBER COMPANY,
By John Haire, Jr.



when equipped with the efficient auxiliary heat of the built-in

**ELECTRIC
QUIKHETER**

It provides comfort on chilly days—adds its warmth to that of the furnace on exceptionally cold days. It is fully hot the minute the switch is turned on. The cold air, drawn in at the floor level, is quickly heated and forced out at the top—and immediately begins to circulate through the whole room. Bedrooms, dressingrooms and nurseries need this cheerful warmth.

In New Construction or Modernization

the built-in Electric QUIKHETER should be included in the plans. Installed during the Spring or Summer months, it will be ready to go into effective service when needed.

There is a Wholesaler near you

who will make quick delivery from stock—in either 1,000, 1,250 or 1,500 watt sizes. Write us for his name—and for descriptive circular.

Frank Adam
ELECTRIC COMPANY
ST. LOUIS

"TruCost" Estimating Figures for Home Designs in this Issue



The Editors have prepared a 28 PAGE EXPLANATION of American Builder's "TruCost" system of quick, accurate estimating and offer it to anyone interested at 25 cents per copy. Please enclose payment when ordering. Address American Builder, 30 Church St., New York City.

Page 66, April: Mott, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 106 lin. ft.; Trench Walls, 90 lin. ft.; Basement Floor, 645 sq. ft.; Garage Floor, 180 sq. ft.; Excavation per ft. deep, 28 cu. yds.; Outside Walls, 21.00 sqs.; First Floor, 6.50 sqs.; Second Floor, with fin. flg., 6.50 sqs.; Ceiling, 13.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 11.00 sqs.; Cornice, C & F, 170 lin. ft.; Cornice, 6", 64 lin. ft.; Partitions, 180 lin. ft.; Inside Finish OS Walls, 212 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 14 opgs.; Windows and Casements, 18 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, 1.08 sqs.

Page 67, April: Mott, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 114 lin. ft.; Trench Walls, 90 lin. ft.; Basement Floor, 792 sq. ft.; Garage Floor, 190 sq. ft.; Excavation per ft. deep, 33 cu. yds.; Outside Walls, 25.00 sqs.; First Floor, 8.00 sqs.; Second Floor, with fin. flg., 8.00 sqs.; Ceiling, 16.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 14.50 sqs.; Hips and Valleys, 104 lin. ft.; Cornice (incl. Porch), C & F, 175 lin. ft.; Cornice, 8", 175 lin. ft.; Partitions, 200 lin. ft.; Inside Finish OS Walls, 228 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and (Continued to page 170)



Building material dealers are not prone to "take pen in hand" to write voluntary letters of praise to manufacturers. But they have done it regarding Hall Overall Garage Door Sets. No item in our line ever aroused more spontaneous enthusiasm than has our garage door hardware.

Hall Overall Garage Door Sets are simple in design and easy to install, with no complicated parts to get out of order or ever give trouble. The original, low-priced, overhead type of garage door set, Hall Overall offers a variety of sizes and styles for every type of garage.

Ask your dealer about Hall Overall Garage Door Sets or write us for information and new low prices for 1940.



HALL MANUFACTURING CO.
Cedar Rapids, Iowa

ONE RIG *gives you* Double SAVINGS

1. on Electric Handsaw Work
2. on Bench Sawing . . .




Speedmatic is Built to do Both Jobs Fast




Trims off roofers
Pocket cuts floors

Use Speedmatic Electric Handsaw alongside any other Saw on the market—compare it, cut for cut, feature for feature. Also consider the convenience and savings of the Porter-Cable Speedmatic Slide Arm! Then you will understand Speedmatic's nationwide popularity. For it does two jobs with equal efficiency—(1) as an electric handsaw and (2) as a powerful bench saw—either "on the job" or in the shop. Get more information on the BIG DOUBLE SAVINGS this builder's helper brings you. Write TODAY!

PORTER-CABLE Machine Co.
 1721-D No. Salina St. Syracuse, N. Y.



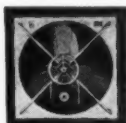
SAVE

ON FASTER INSTALLATION LOWER COST OF MACHINING FRAMES WITH THIS NEW 142 FT. SASH BALANCE

You will save both time and money with this improved Caldwell Type 142 FT. Sash Balance. Check these 6 important features: 1. COMPACT: Face 3/4", depth 3". 2. DURABLE: All material 1/16" steel, treated with rust-resisting metallic lacquer. 3. POWERFUL: Meets requirements of all residential windows using 1 or 2 balances per sash. 4. EASILY INSTALLED: Flat top, only one screw driven. 5. KINK-PROOF: Special C. R. Steel Tape. 6. ENCLOSED MECHANISM: All working parts completely enclosed. You will find that it pays to specify Caldwell Balances for every make of window.

CALDWELL Sash Balances
 The Caldwell Manufacturing Company, Rochester, N.Y.

DOOR OPENERS (Electric) —See Openers, Door	
DOOR PULLS —See Hardware, Door	
DOOR ROLLERS —See Rollers, Door	
DOOR SPRINGS —See Springs, Door	
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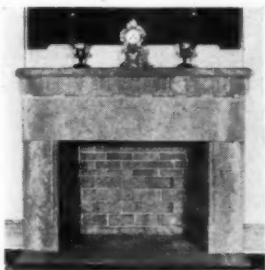
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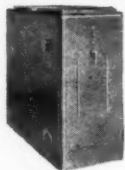
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CONCO Automatic Packaged Heat

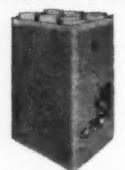
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TruCost Figures

(Continued from page 167)

Cased Opgs., 13 opgs.; Windows and Casements, 20 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, 1.90 sqs.; Porch Ceilings, 1.90 sqs.; Porch Beam, 30 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, (incl. Main Roof).

Page 70, April: Gross-Morton, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 98 lin. ft.; Trench Walls, 8 lin. ft.; Basement Floor, 598 sq. ft.; Excavation per ft. deep, 26 cu. yds.; Outside Walls, 20.50 sqs.; First Floor, 5.90 sqs.; Second Floor, with fin. flg., 6.00 sqs.; Ceiling, 11.90 sqs.; Roof Pitch, 10" rise per ft. run; Roof, 6.50 sqs.; Hips and Valleys, 32 lin. ft.; Cornice, C & F, 115 lin. ft.; Cornice, 6", 115 lin. ft.; Partitions, 140 lin. ft.; Inside Finish OS Walls, 200 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 12 opgs.; Windows and Casements, 15 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1.

Page 71, April: Gross-Morton, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 138 lin. ft.; Trench Walls, 18 lin. ft.; Basement Floor, 1,134 sq. ft.; Excavation per ft. deep, 48 cu. yds.; Outside Walls, 20.00 sqs.; First Floor, 11.00 sqs.; Second Floor, without fin. flg., 11.00 sqs.; Ceiling, 11.00 sqs.; Roof Pitch, 14" rise per ft. run; Roof, 16.00 sqs.; Hips and Valleys, 75 lin. ft.; Cornice, C & F, 200 lin. ft.; Partitions, 188 lin. ft.; Inside Finish OS Walls, 140 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 15 opgs.; Windows and Casements, 20 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, .33 sqs.

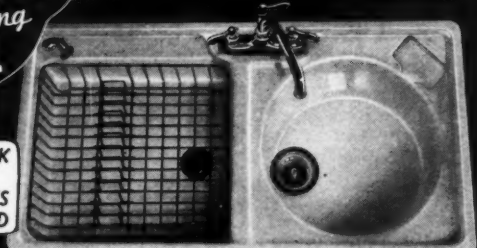
Page 74, April: Allen, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 148 lin. ft.; Trench Walls, 80 lin. ft.; Basement Floor, 1200 sq. ft.; Garage Floor, 200 sq. ft.; Excavation

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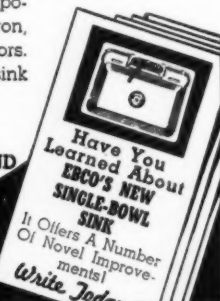
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3	44"	23-1/2"	3 light 12x16	32 lbs.

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Page 87, April: Mezger, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 150 lin. ft.; Trench Walls, 120 lin. ft.; Basement Floor, 1,080 sq. ft.; Garage Floor, 400 sq. ft.; Excavation per ft. deep, 46 cu. yds.; Outside Walls, 30 sqs.; First Floor, 11.00 sqs.; Second Floor, with fin. flg., 6.50 sqs.; Ceiling, 20.00 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 20.00 sqs.; Hips and Valleys, 75 lin. ft.; Cornice, C & F, 250 lin. ft.; Partitions, 250 lin. ft.; Inside Finish OS Walls, 275 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 2; Inside Doors and Cased Opgs., 22 opgs.; Windows and Casements, 32 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, 2.00 sqs.; Porch Ceiling, 1.50 sqs.; Porch Beam, 20 lin. ft.; Porch and Balcony Post and Newels, 6; Porch Roof, 3.00 sqs.; Porch Cornice, 20 lin. ft.

Page 91, April: Rorech, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 126 lin. ft.; Trench Walls, 70 lin. ft.; Basement Floor, 952 sq. ft.; Garage Floor, 400 sq. ft.; Excavation per ft. deep, 40 cu. yds.; Outside Walls, 17.00 sqs.; First Floor, 10.00 sqs.; Second Floor, without fin. flg., 10.00 sqs.; Ceiling, 10.00 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 19.00 sqs.; Cornice, C & F, 200 lin. ft.; Partitions, 150 lin. ft.; Inside Finish

(Continued to page 174)



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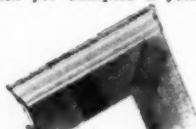
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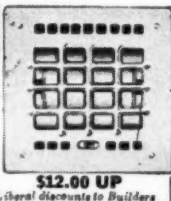
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OS Walls, 126 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 2; Inside Doors and Cased Opgs., 14 opgs.; Windows and Casements, 18 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, .20 sqs.

Page 92, April: Chester Hill.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 160 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, 1,400 sq. ft.; Garage Floor, 190 sq. ft.; Excavation per ft. deep, 50 cu. yds.; Outside Walls, 22.00 sqs.; First Floor, 14.00 sqs.; Second Floor, with fin. flg., 6.00 sqs.; Second Floor, without fin. flg., 2.00 sqs.; Ceiling, 20.00 sqs.; Roof Pitch, 14" rise per ft. run; Roof, 19.00 sqs.; Hips and Valleys, 32 lin. ft.; Cornice, C & F, 225 lin. ft.; Partitions, 225 lin. ft.; Inside Finish OS Walls, 250 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 20 opgs.; Windows and Casements, 30 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 1.00 sq.; Porch and Balcony Post and Newels, 3; Porch and Deck Rail, 14 lin. ft.

Page 95, April: McGowan, Bldr.

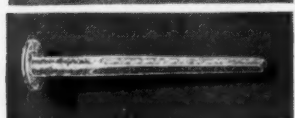
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 110 lin. ft.; Trench Walls, 17 lin. ft.; Basement Floor, 700 sq. ft.; Excavation per ft. deep, 28 cu. yds.; Outside Walls, 14.00 sqs.; First Floor, 7.00 sqs.; Ceiling, 7.00 sqs.; Roof Pitch, 9" rise per ft. run; Roof, 8.00 sqs.; Hips and Valleys, 32 lin. ft.; Cornice (incl. Porch), C & F, 120 lin. ft.; Partitions, 80 lin. ft.; Inside Finish OS Walls, 110 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 7 opgs.; Windows and Casements, 15 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 32 lin. ft.; Porch Floor, .70 sqs.; Porch Ceilings, .60 sqs.; Porch Beam, 17 lin. ft.; Porch and Balcony Post and Newels, 1; Porch Roof, (incl. under Main Roof).

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Page 137, April: Levitt, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 124 lin. ft.; Trench Walls, 108 lin. ft.; Basement Floor, 880 sq. ft.; Garage Floor, 190 sq. ft.; Excavation per ft. deep, 36 cu. yds.; Outside Walls, 27.00 sqs.; First Floor, 8.75 sqs.; Second Floor, with fin. flg., 8.75 sqs.; Ceiling, 19.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 12.00 sqs.; Cornice, C & F, 124 lin. ft.; Partitions, 220 lin. ft.; Inside Finish OS Walls, 250 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 17 opgs.; Windows and Casements, 23 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, 3.00 sqs.; Porch Ceilings, 1.20 sqs.; Porch Beam, 32 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, 1.50 sqs.; Porch and Garage Cornice, 72 lin. ft.; Porch and Deck Rail, 200 lin. ft.

Page 138, April: Williams-Harter, Bldrs.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 140 lin. ft.; Trench Walls, 100 lin. ft.; Basement Floor, 975 sq. ft.; Garage Floor, 190 sq. ft.; Excavation per ft. deep, 33 cu. yds.; Outside Walls, 22 sqs.; First Floor, 9.75 sqs.; Second Floor, with fin. flg., 6.00 sqs.; Ceiling, 18.00 sqs.; Roof Pitch, 10" rise per ft. run; Roof, 16.00 sqs.; Hips and Valleys, 20 lin. ft.; Cornice, C & F, 200 lin. ft.; Partitions, 188 lin. ft.; Inside Finish OS Walls, 250 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 16 opgs.; Windows and Casements, 24 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, 2.00 sqs.; Porch Ceilings, 1.50 sqs.; Porch Beam, 24 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, 2.40 sqs.; Porch Cornice, 32 lin. ft.

Page 139, April: Williams-Harter, Bldrs.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 110 lin. ft.; Trench Walls, 80 lin. ft.; Basement Floor, 675 sq. ft.; Garage Floor, 190 sq. ft.; Excavation per ft. deep, 30 cu. yds.; Outside Walls, 22.00 sqs.; First Floor,

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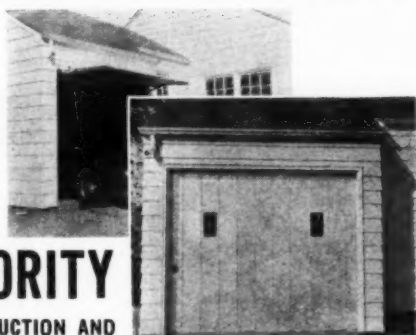


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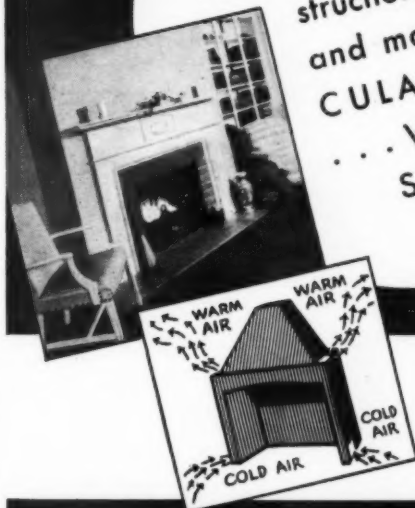
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Tylac Co.	146
U. S. Gypsum Co.	31

BRIGHT METAL MOULDINGS

CHROME, COPPER, BRONZE,
STAINLESS STEEL, ETC.

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MOULDINGS—PICTURE

Bradley Lbr. Co.	9
Curtis Companies, Inc.	33
Exchange Sawmills Sales Co., Kansas City, Mo.	
Frost Lumber Industries, Inc., Shreveport, La.	
Kinzua Pine Mills Co., Kinzua, Ore.	
Milcor Steel Co., Milwaukee, Wis.	
U. S. Gypsum Co.	31
Weyerhaeuser Sales Co.	13
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Bradley Lbr. Co.	9
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Exchange Sawmills Sales Co., Kansas City, Mo.	
Farley & Loetscher Mfg. Co.	190
Florida Louisiana Red Cypress Co., Jacksonville, Fla.	
Frost Lumber Industries, Inc., Shreveport, La.	
Kinzua Pine Mills Co., Kinzua, Ore.	
Marsh Wall Products, Inc.	122
Pacific Mutual Door Co., Tacoma, Wash.	
Rainy Lake Lumber Co., Chicago, Ill.	
Shevlin Pine Sales Co., Minneapolis, Minn.	
Weyerhaeuser Sales Co.	13
Wood Conversion Co.	35

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Moulding

MOULDING KNIVES—See Knives,

Moulding

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Movable

NAILS—ALUMINUM

Aluminum Co. of America, Pittsburgh, Pa.

NAILS—CLAMP

Tennessee Coal, Iron & R. R. Co.

NAILS—CUT

Aluminum Co. of America, Pittsburgh, Pa.

Amer. Steel & Wire Co., Cleveland, Ohio.

W. H. Maze Co.

Tennessee Coal, Iron & R. R. Co.

NAILS—FURRING

Amer. Steel & Wire Co., Cleveland, Ohio.

Milcor Steel Co., Milwaukee, Wis.

Tennessee Coal, Iron & R. R. Co.

NAILS—GALVANIZED

Amer. Steel & Wire Co., Cleveland, Ohio.

The Deniston Co., Chicago, Ill.

Edwards Mfg. Co.

The Lehon Co.

W. H. Maze Co.

Tennessee Coal, Iron & R. R. Co.

Ruberoid Co.

U. S. Gypsum Co.

NAILS—LEAD

Amer. Steel & Wire Co., Cleveland, Ohio.

The Deniston Co., Chicago, Ill.

Edwards Mfg. Co.

W. H. Maze Co.

Tennessee Coal, Iron & R. R. Co.

NAILS—LEAD SEAL

The Deniston Co., Chicago, Ill.

NAILS—ROOFING

Aluminum Co. of America, Pittsburgh, Pa.

American Steel & Wire Co., Cleveland,

Celotex Corp.

The Deniston Co., Chicago, Ill.

Edwards Mfg. Co.

The Lehon Co.

W. H. Maze Co.

Milcor Steel Co., Milwaukee, Wis.

Ruberoid Co.

U. S. Gypsum Co.

Tennessee Coal, Iron & R. R. Co.

Weyerhaeuser Sales Co.

NAILS—ZINC DIPPED

W. H. Maze Co.

NAIL SETS—See Sets, Nail

NETTING—WIRE

Amer. Steel & Wire Co., Cleveland, Ohio.

Tennessee Coal, Iron & R. R. Co.

NEWELS—WOOD

Curtis Companies, Inc.

Farley & Loetscher Mfg. Co.

Pacific Mutual Door Co., Tacoma, Wash.

NUMBERS—HOUSE—See Letters and

Numbers

OIL BURNERS—See Furnaces, Oil-Fired,

Also Heating Plants, Oil-Fired

OPENERS—DOOR (Electric)

Edwards & Co.

Frantz Mfg. Co.

Kinnear Mfg. Co.

Rowe Mfg. Co.

Overhead Door Corp.

Stanley Works

Wagner Mfg. Co.

OPENERS—GARAGE DOOR

Frantz Mfg. Co.

Kinnear Mfg. Co.

National Mfg. Co.

Overhead Door Corp.

Rowe Mfg. Co.

Stanley Works

Wagner Mfg. Co.

OPERATORS—SASH

Detroit Steel Products Co.

H. B. Ives Co.

Mesker Brothers Iron Co.

Truscon Steel Co.

Vento Steel Pds. Co., Muskegon, Mich.

ORNAMENTS—CHIMNEY

Majestic Co.

ORNAMENTS—SHEET METAL

Edwards Mfg. Co.

Milcor Steel Co., Milwaukee, Wis.

ORNAMENTS—WALL

Celotex Corp.

Cincinnati Iron Fence Co.

Majestic Co.

ORNAMENTAL BRACKETS—See

Brackets, Ornamental

OUTLETS, EAVES TROUGH

Edwards Mfg. Co.

Milcor Steel Co., Milwaukee, Wis.

OUTLETS, ELECTRIC

General Electric Co.

National Electric Prod. Corp.

OUTLETS—TELEPHONE

General Electric Co.

OUTLET BOXES—See Boxes, Outlet

OVERHEAD CARRIERS—See Carriers,

Overhead

OVERHEAD DOORS—See Doors, Overhead

PACKAGE RECEIVERS—See Receivers,

Package

PAINTS—ALUMINUM

Aluminum Co. of America, Pittsburgh, Pa.

Breinig Bros.

Calbar Paint & Varnish Co.

Carr, Adams & Collier Co.

The Lehon Co.

Pecora Paint Co., Inc.

Pittsburgh Plate Glass Co.

Protection Prod. Mfg. Co., Kalamazoo, Mich.

Sherwin-Williams Co.

L. Sonneborn Sons, Inc.

PAINTS—ASPHALT

Armstrong Cork Co.

Barber Asphalt Corp.

Calbar Paint & Varnish Co.	191
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Breinig Bros.	187
The Philip Carey Co.	36
Carr, Adams & Collier Co.	12
The Flintkote Co.	39
The Lehon Co.	156
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Pittsburgh Plate Glass Co.	44
Ruberoid Co.	42
Sherwin-Williams Co.	164A
L. Sonneborn Sons, Inc.	161
The Texas Co., New York, N. Y.	
U. S. Gypsum Co.	31

PAINTS—BARN

Breinig Bros.	187
Calbar Paint & Varnish Co.	191
Carr, Adams & Collier Co.	12
Pittsburgh Plate Glass Co.	44
Sherwin-Williams Co.	164A
L. Sonneborn Sons, Inc.	161

PAINTS—CEMENT AND STUCCO

Breinig Bros.	187
Calbar Paint & Varnish Co.	191
Carr, Adams & Collier Co.	12
Colorcrete Industries, Inc.	160
The Flintkote Co.	39
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Medusa Portland Cement Co.	29
Pecora Paint Co., Inc.	159
Pittsburgh Plate Glass Co.	44
Protection Prod. Mfg. Co., Kalamazoo, Mich.	
Sherwin-Williams Co.	164A
L. Sonneborn Sons, Inc.	161
U. S. Gypsum Co.	31

PAINTS—HOUSE

Aluminum Co. of America, Pittsburgh, Pa.	
Breinig Bros.	187
Calbar Paint & Varnish Co.	191
Carr, Adams & Collier Co.	12
Laux Sales Co.	156
Pittsburgh Plate Glass Co.	44
Sherwin-Williams Co.	164A
L. Sonneborn Sons, Inc.	161

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The Barrett Co.	123
Breinig Bros.	187
The Philip Carey Co.	36
Calbar Paint & Varnish Co.	191
Carr, Adams & Collier Co.	12
Edwards Mfg. Co.	175
Flintkote Co.	39
Pecora Paint Co., Inc.	159
Pittsburgh Plate Glass Co.	44
Ruberoid Co.	42
Sherwin-Williams Co.	164A
L. Sonneborn Sons, Inc.	161

PAINTS—SYNTHETIC RESIN

Laux Sales Co.

PAINTS—WATER

Breinig Bros.	187
Calbar Paint & Varnish Co.	191
Carr, Adams & Collier Co.	12
Laux Sales Co.	156
Medusa Portland Cement Co.	29
Ohio Hydrate & Supply Co.	158
Sherwin-Williams Co.	164A
U. S. Gypsum Co.	31

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Breinig Bros.	187
Calbar Paint & Varnish Co.	191
The Philip Carey Co.	36
Carr, Adams & Collier Co.	12
The Flintkote Co.	39
Donley Brothers Co.	170
The Lehon Co.	156
Medusa Portland Cement Co.	29
Pecora Paint Co., Inc.	159
Pittsburgh Plate Glass Co.	44
Protection Prod. Mfg. Co., Kalamazoo, Mich.	
Sherwin-Williams Co.	164A
L. Sonneborn Sons, Inc.	161

PAINT BRUSHES—See Brushes, Paint

PAINT FILLERS—See Fillers, Paint

PAINT REMOVERS—See Removers,

Paint and Varnish

PANELBOARDS—ELECTRIC

Frank Adam Electric Co.

Square D Co.

PANELING—HARDWOOD

Cadwallader-Gibson Co.—See Adv. this page

Frost Lumber Ind., Inc., Shreveport, La.

CADWALL-PHILIPPANEL

Solid Philippine Mahogany Paneling

Modern, Beautiful, Economical

CADWALLADER-GIBSON CO., Inc.

Los Angeles, Calif.

PANELING—PINE

Frost Lumber Ind., Inc., Shreveport, La.

PANELING—WALL (Oak, Gum, Pine)

Bradley Lumber Co.

M. B. Farrin Lbr. Co., Cincinnati, Ohio.

PANELS—FIBREBOARD

Armstrong Cork Co.

Marsh Wall Products, Inc.

PANELS—PLASTIC LAMINATE

Farley & Loetscher Mfg. Co.

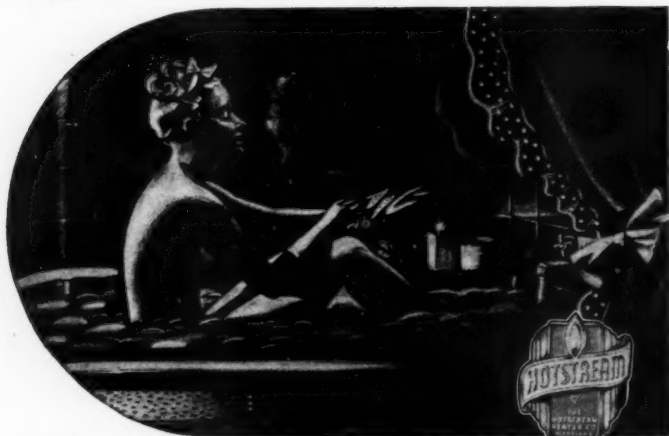
General Electric Co., Plastics Dept., Pitts-

field, Mass.

U. S. Plywood Corp.

(Continued on page 180)

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HOTSTREAM WATER HEATERS

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Send new catalog and details on Standard Unit Kitchen Cabinetry.

Name _____

Address _____

☐ Architect
☐ Builder



☐ Dealer
☐ Owner

TruCost Figures

(Continued from page 175)

6.90 sqs.; Second Floor, with fin. flg., 7.00 sqs.; Ceiling, 14.00 sqs.; Roof Pitch, 14" rise per ft. run; Roof, 14.00 sqs.; Hips and Valleys, 20 lin. ft.; Cornice, C & F, 200 lin. ft.; Partitions, 200 lin. ft.; Inside Finish OS Walls, 220 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 15 opgs.; Windows and Casements, 20 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, 1.50 sqs.; Porch Ceilings, .75 sqs.; Porch Beam, 26 lin. ft.; Porch and Balcony Post and Newels, 2; Porch Roof, (incl. under Main Roof); Cornice, 30 lin. ft.

2-Flats—

(Continued from page 102)

opening devices for steel casements. If needed, double-acting door hinge for swinging door, furnishing and installing brass push plates, etc.

Plumbing: Remove ice box waste line and gas line to outside wall where same run through pantry partition, relocate gas line for first floor stove. Change location of sink waste stack vent and water lines for new sink location. Furnish new chrome sink faucet and trap, and strainer not furnished with cabinet sink.

Cabinets: "Unibilt" St. Charles steel cabinets, sink, strainer and new type colored porcelain top for sink and counter, or if preferred top may be white (sink included but no faucet, strainer or trap).

Steel Sash: Steel casements over sink with Fenwrought metal framed copper screens, and crank handles for opening windows.

Glass: New glass for steel frames over sink.

Linoleum: Prepare kitchen floor, install standard weight marbleized field Nairn linoleum laid over felt cemented to floor and to linoleum, white feature strip and 6" black border.

Venetian Blinds: For windows over sink.

Painting and Decorating: Wash walls and prepare for painting with DuPont paint and enamel. Paint and stipple (2 coats) above chair rail; enamel (2 coats) below chair rail. Wash and paint



LANSING
3 1/2 E. D.
Trailer
Mixer

**ECONOMICAL
FAST**

This new E. D. (End Dump) Lansing Trailer Mixer is faster, more compact, easier handled. Overall length only 57" and entire width 68", with height of 65"; 26" wheels with pneumatic tires. Write NOW for complete information.

**EASILY
HANDLED
TILTING
WHEEL,
GEARS &
BRAKE**



LANSING COMPANY, LANSING, MICHIGAN

A New Mixer Built for Action

woodwork (including doors) 3 coats.

Masonry: Remove pantry window and brick up same; remove old kitchen window, partly brick up, install new steel windows and make sill.

Plastering: Plaster where ironing board is removed. New plastering (3 coats) where ceiling is furred down and arch made. Sundry plaster patching.

Electrical Wiring: Move ceiling outlet to new center; hang only two new fixtures—1 at new ceiling center and 1 in arch over sink. Install new refrigerator outlet, new counter top, and double combination double convenience outlet with two switches. New plates on any old convenience outlets.

BATH & BATH HALL—Carpentry: Remove dado rail & grounds and remove wood medicine case. Fur out for, furnish and install new Morton medicine case (metal). Remove casing projections. Chrome and replace hardware. Install flat type curtain rods (single).

Plumbing: Furnish and install chrome concealed shower, shower rod, shower curtain and window curtain to match. Furnish and install Standard lavatory, combination faucet, pop-up waste, towel bars and trap. Furnish and install new Church white toilet seat.

Linowall (bath only): 5 feet (except 7 feet around bath) with metal beading.

Plaster Patching: Estimate any needed.

Electric Wiring (bath only): Install new outlet over medicine case (difficult job of fishing wires, etc.). Hang 2 new fixtures.

New Lighting Fixtures: 1 new center ceiling fixture; 1 new bracket fixture, with convenience receptacle for shaving, etc.

Painting: Wash and prepare bath walls above Linowall dado. Paint above and stipple (2 coats). Enamel trim 2 coats. Remove bath hall wallpaper; size and prepare wall for papering. Calcimine ceiling, paper walls. Wash and enamel trim 1 coat. Sand, fill and varnish floor 2 coats. Wash, seal and enamel doors 2 coats. Closet, calcimine walls and ceiling. Enamel trim 1 coat.

LIVING ROOM & SMALL HALL: Venetian Blinds.

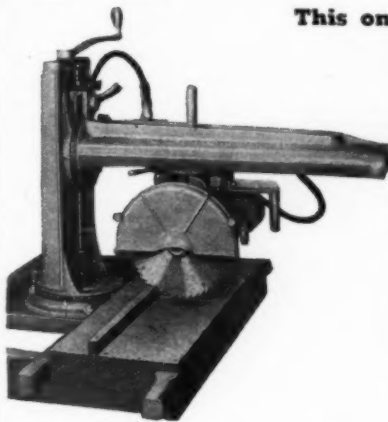
Plastering: Estimate an average.

Electric Wiring: Install two new Duplex convenience outlets; (Continued to page 182)

The Builder's Saw!

For more profit, the Wallace No. 1 Radial Saw is phenomenal in its economies! Saves from \$75 to \$200 on every \$4,000 to \$8,000 residence. Equally profitable for heavy construction work.

This one machine does:



- X-CUTTING
- MITERING
- RIPPING
- DADOING
- ROUTING
- SHAPING
- JOINTING
- GROOVING
- CUTTING TILE

Safe, speedy, accurate in operation. Cuts jack rafters, hip rafters, studs, joists, sheathing, flooring. Use for cabinet work, mouldings, sash, routing stair-stringers, etc.

If you want to make extra profits, write today for bulletins on the Wallace No. 1 Radial Saw.

J. D. WALLACE & COMPANY

136 S. California Avenue

CHICAGO, ILLINOIS

USE G-E SWITCHES

In New Homes
You Build



Left: GE3008,
etc., G-E Silent
Sphinx Switches
Right: GE2841,
etc., G-E Stand-
ard Switches

These quality switches are ideal for modern homes. G-E Sphinx switches are silent and long-lived. They have no springs to break or blades to hammer away. Their silence lends dignity and comfort to homes having them. G-E Standard Switches also give long, dependable service. They are completely insulated with Textolite. Both of these switches are available in single-pole, double-pole, 3- and 4-way types with either brown or ivory-colored handles. Matching wall plates are available.

For further information see the nearest G-E Merchandise Distributor or write to Section D0774, Appliance and Merchandise Department, General Electric Company, Bridgeport, Conn.

GENERAL ELECTRIC

MAKE SMALL CLOSETS

BIG

WITH
**K-VENIENCE
CLOTHES CLOSET
FIXTURES**

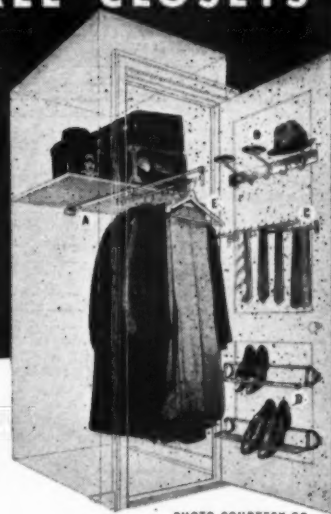


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ARCHITECTURAL FORUM

Small or awkwardly shaped closets are sometimes hard to avoid but have always been a source of irritation in the home. Now you can double the hanging space with no increase in cubage—and provide a neat handy place for wearing apparel simply by installing K-Veniences. More than 40 modern, practical fixtures to choose from. Attach easily to door or wall. Inexpensive. Nationally advertised. Used extensively by leading Long Island and other important developers.

FREE CATALOG—See your Builders' Hardware dealer or write today. Includes many installation ideas—shows complete line.

(A) Clothing Carriers • (B) Hat Holders • (C) Tie Racks • (D) Shoe Racks • (E) Washbone Hangers Closet Rods • Towel Racks Skirt Hangers • Trouser Hangers Garment Brackets.

**KNAPE & VOGT
MANUFACTURING CO.**

Dept. M-4 Grand Rapids, Michigan

PANELS—PLYWOOD	
Carr, Adams & Collier Co.	12
Farley & Loetscher Mfg. Co.	190
Harbor Plywood Corp., Hoquiam, Wash.	
The Mengel Co.	28
Pacific Mutual Door Co., Tacoma	
U. S. Plywood Corp.	22
Weyerhaeuser Sales Co.	13



UNITED STATES PLYWOOD CORPORATION
Executive Offices: 616 West 46th St., New York, N. Y.
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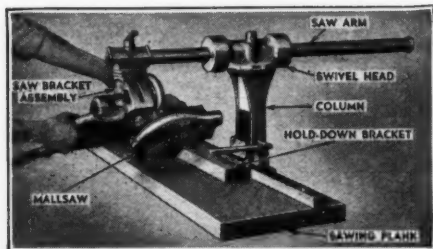
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Street.....
City..... State.....

2-Flats—

(Continued from page 179)

furnish and install new plates for present convenience outlets; remove and disconnect 3 bracket outlets. Hang only two new bracket fixtures over fireplace.

Lighting Fixtures: Furnish two new bracket fixtures over fireplace.

Carpentry: Remove bookcase doors and patch neatly where hinges are removed. Remove, chrome and replace hardware. Renail mouldings and stops. Cut tops from casings.

Painting & Decorating: Remove paper; size and prepare walls for papering. Calcimine ceiling, paper walls. Wash, sand, enamel trim 3 coats. Varnish window sills and sash 1 coat spar varnish. Wash and varnish doors. Sand, fill and varnish floors 2 coats. Wash and calcimine closet. Enamel trim 3 coats.

DINING ROOM: *Venetian Blinds.*

Plastering: As needed.

Wiring: Hang dining room fixtures, install new plates for switch and convenience outlets.

Lighting Fixtures: 1 new center ceiling fixture.

Carpentry: Install cove moulding and picture moulding. Install new dado rail. Cut off casing projections. Remove, chrome and replace hardware.

Painting & Decorating: Remove paper. Size and prepare walls for papering. Calcimine ceiling. Paper walls above dado. Wash, sand and enamel trim 1 coat; new trim 3 coats. Paint and stipple dado 3 coats. Wash and varnish sills and sash 1 coat spar varnish. Sand, fill and varnish floor 2 coats.

BEDROOMS & CLOSETS: *Plastering:* As needed.

Wiring: Install only new fixtures (1 each). Furnish and install new convenience outlet (1 in each room).

Lighting Fixtures: New center fixture, pull chain (in each room).

Carpentry: Remove casing projections. Remove, chrome and replace hardware. Furnish and install double curtain rods.

Painting: Remove wallpaper. Size and prepare walls for papering. Calcimine ceilings. Paper walls. Wash, sand and enamel 2 coats. Wash, varnish sills and sash 1 coat spar varnish. Calcimine closets, walls and ceilings. Enamel trim. Sand, fill and

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varnish floor 2 coats. Wash, seal and enamel doors 2 coats.

STAIR HALL: Carpet: Furnish and install carpet and pads for stairs from first sidewalk level to entrance door to first apartment and including landing.

Plastering: As needed.

Carpentry: No work (unless new front door).

Painting & Decorating: Wash walls and ceilings. Prepare for painting. Paint and stipple above dado 2 coats. Enamel below dado 2 coats. Wash and prepare woodwork. Enamel woodwork 3 coats. Wash and varnish floors, steps and risers. Wash and varnish window sill and sash. Wash and varnish doors.

Electric Fixtures: Furnish 1 double wired fixture at grade entrance, 1 outlet wire to first. Floor and 1 outlet wire to second floor.

Electric Wiring: Hang only 1 new fixture at grade entrance. Furnish and install 2 new mail boxes. Install chime (small bar type) and furnish same.

BASEMENT: Painting: Wash with hose. 1 coat Luminall on walls only. Silver coat all pipes for water lime and electric conduit, windows, door and iron beams. Black enamel furnace faces. Bronze metal furnaces.

NEW FRONT DOOR (if wanted).

Painting: 3 coats spar varnish, sanding, etc.

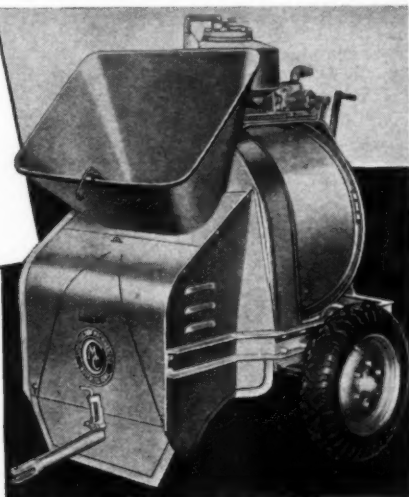
Carpentry: Furnish door, hinges, lock set, knocker, mail slot, chrome house numbers, fit door and attach all of above. Furnish and install leaded glass in opening.

For the above specified modernization program, which represents a complete job of remodeling, Mills & Sons quote a lump sum price. This covers all needed labor and materials for a single flat and the space which is common to both tenants in the building; those items for the flats themselves would have to be doubled to modernize the whole building. Mills also offer alternate schedules which allow the tenant to undertake some of the work for himself at a later date.

The job pictured in this article is a demonstration project which has been opened to public inspection for some time. It is reported that Mills & Sons have resold 30 of these two-flat buildings since the first of the year, indicating good results for their program.

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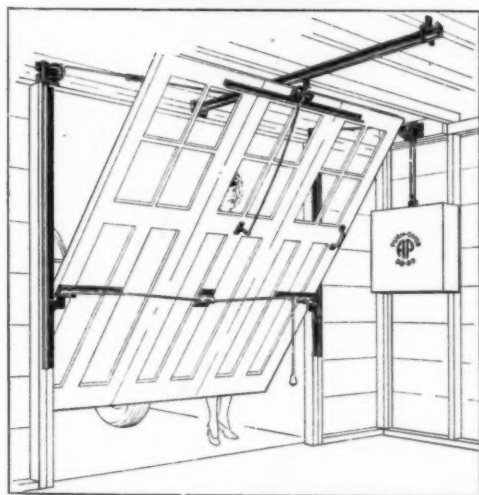
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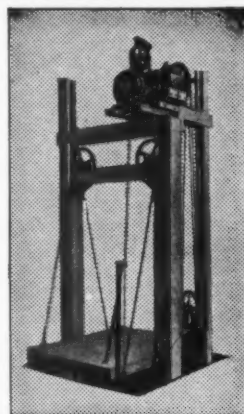


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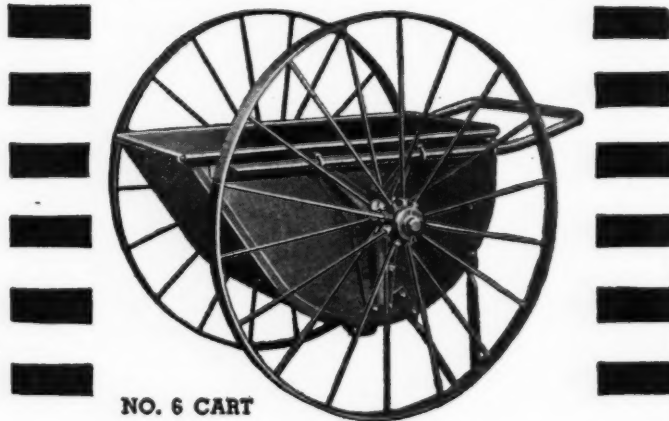
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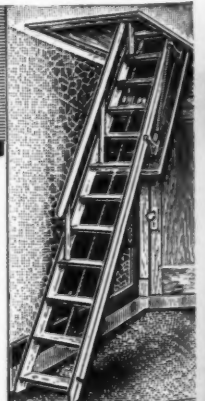
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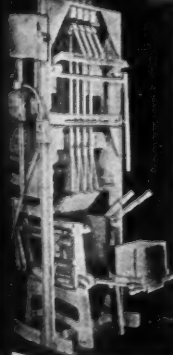
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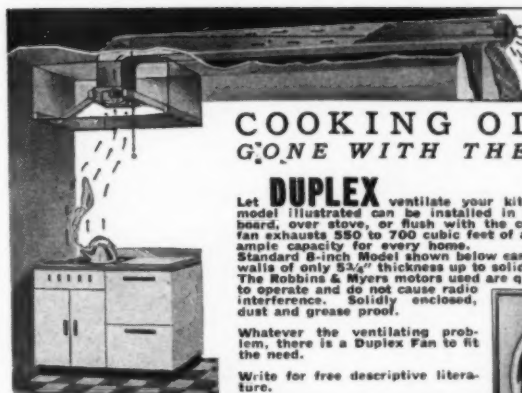
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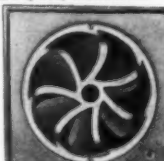
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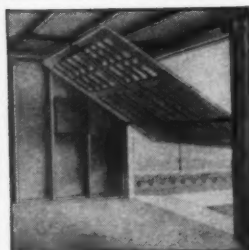
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 ANOVER, Building Paper, Angier Corp., Framingham, Mass.
 ANDERSEN, Basement Windows, Casement Windows, Horizontal Sliding Windows, Master Frames, Andersen Corp., Bayport, Minn.
 ANDERSEN NAROLINE, Double Hung Windows, Andersen Corp., Bayport, Minn.
 ANSULATE, Reinforced Building Paper, Angier Corp., Framingham, Mass.
 ARKANSAS SOFT PINE, Interior Trim, End-Matched and Plain End Flooring, and Common Lumber, Arkansas Soft Pine Bureau, Boyle Bldg., Little Rock, Ark.
 ARMO, Ingersoll Iron, American Rolling Mill Co., Middletown, Ohio.
 ARMO CO. PAINTGRIP, Galvanized Sheets, American Rolling Mill Co., Middletown, Ohio.
 ARMO SEAL-KRIMP, Metal Roofing, American Rolling Mill Co., Middletown, Ohio.
 ARMO, Stainless Steel, American Rolling Mill Co., Middletown, Ohio.
 ARMOR-LITE, Bullet-Proof Glass, American Window Glass Co., Pittsburgh, Pa.
 ARMORPLY, Metal-Covered Plywood, U. S. Plywood Corp., New York, N.Y.
 ARMSTRONG, Linoleum, Armstrong Cork Co., Lancaster, Pa.
 AUTOVENT, Furnace Fans and Kitchen Ventilators, Autovent Fan & Blower Co., Chicago, Ill.

B

BALSAM-WOOL, Insulating Blanket, Wood Conversion Co., St. Paul, Minn.
 BANNER, Hydrated Finishing Lime; Brick Mortar, National Mortar & Supply Co., Pittsburgh, Pa.
 BARBER GENASCO, Roofings, Shingles, Siding, Asphalt Coatings, Insulating Felts, Asphalt Mastic, Barber Asphalt Corp., Barber, N. J.
 BARB-LOCK, Shingles, Barber Asphalt Corp., Barber, N. J.
 BARLIK, Wall Board, Tylac Co., Monticello, Ill.
 BARRETT HOLT, Roof Rings, Vents and Connections, The Barrett Co., New York, N.Y.
 BEAVER, Wall Board; Gypsum Board; Gypsum Sheathing; Gypsum Plaster, Certain-teed Prod. Corp., New York, N.Y.
 BELDMAN-DAWSON, Products of The Flintkote Co., New York, N.Y.
 BELDEN, Brick, Common Brick, Floor Tile, Vitrite Facing Tile, Belden Brick Co., Canton, Ohio.
 BESTWALL, Gypsum Wallboard, Certain-teed Prod. Corp., New York, N.Y.
 BILCO, Bulkheads, Scuttles and Windows, Bilco Mfg. Co., New Haven, Conn.
 BILDRITE, Sheathing, The Insulate Co., Minneapolis, Minn.
 BLENDTEX, Insulating Plank and Tile, U. S. Gypsum Co., Chicago, Ill.
 BLUE BONNET, Bale Ties, American Steel & Wire Co., Cleveland, Ohio, Chicago and New York, N.Y.
 BOSS, Mixers, Hoists, Concrete Carts, American Cement Machine Co., Keokuk, Ia.
 BRADLEY BRAND, Hardwood Lumber, Oak Flooring, Hardwood and Pine Shingles, Bradley Lbr. Co., Kansas, Kansas, Kansas.
 BRIAR HILL, Ashlar Sandstone Veneer Wall Facing, Briar Hill Stone Co., Glenmont, Ohio.
 BRILAC, 4 hour Enamel, Breinig Bros., Inc., Hoboken, N.J.
 BRIMMENT, Masonry and Stucco Cement, Non-Staining Stone Mason's Cement, Louisville Cement Co., Louisville, Ky.
 BROWNSKIN, Waterproof Sheathing Paper, Through-Wall Flashing, Pipe Wrapping, Concrete Protectors, and Dowel Sleeves, Angier Corp., Framingham, Mass.
 BROWNSKIN VAPOR-SEAL, Insulating and Sheathing Paper, Angier Corp., Framingham, Mass.
 BRUCE, Strip Flooring, Wood Block Flooring, Patterned Hardwood Floors, Tuf-Lustre and Bruce-Way Floor Finishes, E. L. Bruce Co., Memphis, Tenn.
 BRVCO-VAR, 4 hour All-Purpose Varnish, Breinig Bros., Inc., Hoboken, N.J.

C

CADWALL-PHILIPANEL, Solid Philippine Mahogany Paneling, Cadwallader Gibson Co., Los Angeles, Calif.
 CAPITOL, Horizontal and Vertical Boilers and Radiators, U. S. Radiator Corp., Detroit, Mich.
 CAREY, Asphalt and Asbestos Roofing, Sheathing and Insulating Materials, The Philip Carey Co., Cleveland, Ohio.
 CAREYSTONE, Asbestos Cement, Shingles, Scored Sheathing, The Philip Carey Co., Lockland, Cincinnati, Ohio.
 CARRARA, Pittsburgh Plate Glass Co., Pittsburgh, Pa.
 CARR-DOR, Overhead Acting Garage Door, Carr, Adams & Collier Co., Dubuque, Iowa.
 CARSTENITE, Wall Covering, Marsh Wall Products, Inc., Dover, Ohio.
 CEDARLINE, Closet Lining, L. Bruce Co., Memphis, Tenn.
 CELLOWARE, Bathroom Fixtures, B & T Floor Co., Columbus, Ohio.
 CELOTEX, Adhesives; Hardboard; Rock Wool; Finish Plank; Building Board; Protection Board; Floor Board; Roof Insulation; Key-Joint Units, Celotex Corp., Chicago, Ill.
 CELOTEX TRAFFIC TOP, Celotex Corp., Chicago, Ill.
 CELOTEX TEXTORD, Interior Wall Finish, Celotex Corp., Chicago, Ill.
 CELOTEX TRIPLE-SEALED, Roofing Products, Celotex Corp., Chicago, Ill.
 CELOTEX VAPOR-SEAL, Lath & Sheathing, Celotex Corp., Chicago, Ill.
 CEMCOAT, Filler and Dustproofing and Interior and Exterior Paints, L. Sonnenborn Sons, Inc., New York, N.Y.
 CEMENTICO, Masonry Paint, U. S. Gypsum Co., Chicago, Ill.
 CENTURY, Gas Ranges, National Radiator Co., Johnston, Pa.
 CENTURY PROGRESS, Flooring, Masonite Corp., Chicago, Ill.
 CERTAIN-TEED, Asphalt Shingles and Roofing; Roof Coatings and Cements; Asphalt and Tarred Felts; Partition Tile; Insulating Paper; Brick-Tex Asphalt Siding; Certain-teed Prod. Corp., New York, N.Y.
 C.P. (CERTIFIED PERFORMANCE) Gas Ranges, American Gas Association, New York, N.Y.
 CERTIGRADE, Red Cedar Shingles, Red Cedar Shingle Bureau, Seattle, Wash.
 C. H. & E. Contractors Equipment, C. H. & E. Manufacturing Co., Milwaukee, Wis.
 CHROMEDGE, Metal Mouldings, B & T Floor Co., Columbus, Ohio.
 CLERESPAN, Joists, Truscon Steel Co., Youngstown, Ohio.
 CMC, Concrete Mixers, Hoists, Saw Rigs, Concrete Carts and Wheelbarrows, Construction Machinery Co., Waterloo, Iowa.
 CMC, Dual Prime Contractors' Pumps, Construction Machinery Co., Waterloo, Iowa.
 COBURN, Rack Door Hangers, Overhead Hardware Sets; Rolling Ladders and Monorail Systems, Coburn Trolley Track Co., Holyoke, Mass.
 COLOR CLEAR, Libbey-Owens-Ford Glass Co., Toledo, Ohio.
 COLORCRETE, Brick Stucco and Mortar Colors and Waterproof Coatings; Cement Brick, Concrete Block and Hollow Tile Machines and Molds, Colorcrete Industries Inc., Holland, Mich.
 COLUMBIA, (C-2 Brand) Calcium Chloride for Concrete Curing, Dust Control, Ice Control, and Tractor Tire and Fire Barrel Anti-Freeze, Columbia Alkali Corp., New York, N.Y.
 COMBUSTIONER, Automatic Stokers for Homes and Industry, Combustioneer Division of The Steel Products Engineering Co., Springfield, Ohio.
 COMMANDER, Fibre Boards, Upon Co., Lockport, N.Y.
 CONCO, Coal Stokers, Oil Burner and Gas Heating Plant, Conco Corporation, Mendota, Ill.
 COOLVENT, Active Ventilating Fans, Autovent Fan & Blower Co., Chicago, Ill.
 COPPERSKIN, Dampproofing and Waterproofing Paper, Angier Corp., Framingham, Mass.
 COPPERSKIN VAPOR-SEAL, Insulating and Sheathing Paper, Angier Corp., Framingham, Mass.
 COSALCO, Metal Frames, Cases and Mouldings, Colonial Sales Corp., New York, N.Y.
 COTSWOLD, BOLFORD, INTERNATIONAL, Casement Windows, Hope's Windows, Inc., Jamestown, N.Y.
 CRAW-FIR-DOR, Fir Door Institute, Tacoma Bldg., Tacoma, Wash.
 C-S-I, Certain-Teed Structural Insulation, Certain-teed Prod. Corp., New York, N.Y.
 C-S-I, Interior Finish, Tile Board; Finish Plank; Anhydrous Sheathing; Anhydrous Key Lap Lath; Roof Insulation, Certain-teed Prod. Corp., New York, N.Y.
 CURTIS, Woodwork, Curtis Companies, Inc., Clinton, Iowa.

D

DANDIE Mixers, Koehring Co., Milwaukee, Wis.
 DELTAFESTON, DELTAGLASS, Insulated Wire, General Electric Co., Appliance & De Luxe, Kitchen Cabinets, Farley & Loetscher Mfg. Co., Dubuque, Iowa.
 DENCO, Lead-Head Nails, The Deniston Co., Chicago, Ill.

DENNING, Ornamental Picket Fence, Portable Corncribs, Illinois Wire & Mfg. Co., Joliet, Ill.
 DEWALT, Handworking Tools, DeWalt Products Corp., Lancaster, Pa.
 DIXIE, Gas-Fired Automatic Water Heaters, Hotstream Heater Co., Cleveland, Ohio.
 DRAFTITE, Weatherstrip, Higher Co., St. Cloud, Minn.
 DRAPE-O-SATS, Domestic, Commercial and Industrial Draft Controls, Hotstream Heater Co., Cleveland, Ohio.
 DREADNAUGHT, Floor Sanders; Speed Edgers and Wizzard Floor Surfacing Machines, Clarke Sander Machine Co., Muskegon, Mich.
 DUNBRICK, Cement Brick, W. E. Dunn Mfg. Co., Holland, Mich.
 DUNSTONE, Concrete Block Machine, W. E. Dunn Mfg. Co., Holland, Mich.
 DUNTEX, Roofing Tile Machine, W. E. Dunn Mfg. Co., Holland, Mich.
 DUO-SEAL, Farley & Loetscher Mfg. Co., Dubuque, Iowa.
 DU PONT, Chromated Zinc Chloride, E. I. du Pont de Nemours & Co., Grasse Chemicals Dept., Wilmington, Del.
 DURACAL, Casein Powder Paint, U. S. Gypsum Co., Chicago, Ill.

E

E-Z-GLAZE, Puttyless Sash, Farley & Loetscher Mfg. Co., Dubuque, Iowa.
 E-Z-VENT, Storm Sash, Farley & Loetscher Mfg. Co., Dubuque, Iowa.
 EBCO, Kitchen Sinks, Wash Sinks; Drinking Fountains, Ebcu Mfg. Co., Columbus, Ohio.
 ESSCO, Southern Pine; Southern Hardwoods; Ponderosa Pine; West Coast Woods; Oak Flooring, Exchange Sawmill Sales Co., Kansas City, Mo.
 ETERNIT, Asbestos Roofing Products, Ruberoid Co., New York, N.Y.
 EVERDUE, Metal, The American Brass Co., Waterbury, Conn. and New York, N.Y.
 EVERREADY, Combination Woodworker, Portable Case Machine Co., Syracuse, N.Y.
 EXTERIOR D.F.P.A., Exterior Plywood, Douglas Fir Plywood Assn., Tacoma, Wash.
 EXTRUDALITE, Extruded Metal Shapes for Store Fronts, Libbey-Owens-Ford Glass Co., Toledo, Ohio.

F

FA, Electric Wiring Equipment, Frank Adam Electric Co., St. Louis, Mo.
 FARLITE, Farley & Loetscher Mfg. Co., Dubuque, Iowa.
 FARLO, FARLO-UNIQUE, FARLO-VENT, FARLO-KORE, Window Frames, Farley & Loetscher Mfg. Co., Dubuque, Iowa.
 FARLOEX, Farley & Loetscher Mfg. Co., Dubuque, Iowa.
 FENESTRA, Screens and Insulating Windows, Detroit Steel Products Co., Detroit, Mich.
 FENESTRA, Steel Windows and Doors, Detroit Steel Products Co., Detroit, Mich.
 FENESTRA, Detroit Steel Products Co., Detroit, Mich.
 FERROCLAD, Steel Deck, Roof, Truscon Steel Co., Youngstown, Ohio.
 FERROCLAD, Wall Panels, Truscon Steel Co., Youngstown, Ohio.
 FIBERDUCT, Non-Metallic Under-door Duct, General Electric Co., Appliance & Merch. Dept., Bridgeport, Conn.
 FIBERLITE, Fiber Tile Board, The Insulate Co., Minneapolis, Minn.
 FIBRO, Door Hardware, The Insulate Co., Danville, Ill.
 FIRZITE, Pretreatment for Fir, Breinig Bros., Inc., Hoboken, N.J.
 FLAMENOL, S.D. Building Wire, General Electric Co., Appliance & Merch. Dept., Bridgeport, Conn.
 FLEXBOARD, Asbestos Building Board, Johns-Manville, New York, N.Y.
 FLEXCELL, Expansion Joints, Celotex Corp., Chicago, Ill.
 FLEXGLASS, Glass Wall Covering Cloth-Backed, U. S. Plywood Corp., New York, N.Y.
 FLEX-I-SLAB, Farley & Loetscher Mfg. Co., Dubuque, Iowa.
 FLEXWOOD, Wood Veneer, U. S. Plywood Corp., New York, N.Y.
 FLINTKOTE, Roofing, Sheathing and Insulating Products, The Flintkote Co., New York, N.Y.
 4-SQUARE, Weyerhaeuser Sales Co., St. Paul, Minn.
 FRANTZ, Builders Hardware, Frantz Mfg. Co., Sterling, Ill.
 FRAZIER, Balanced Disappearing Attic Stairs, Frazier, Inc., Pittsburgh, Pa.
 FUNGISEAL, Laux Sales Co., Seattle, Wash.

G

G-E, GENERAL ELECTRIC, Air Conditioning and Heating Equipment, General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N. J.
 G-E, GENERAL ELECTRIC, Electric Service Entrance Cable, Flexible Conduit, General Electric Co., Appliance & Merch. Dept., Bridgeport, Conn.
 G-E, GENERAL ELECTRIC, Electric Refrigerators, Kitchen Cabinets and Sinks, Electric Appliances, General Electric Co., Appliance & Merch. Dept., Bridgeport, Conn.
 GIBBS, DE LUXE Marbles and Wood Reproductions, Gibbs Boardtile Corp., Chicago, Ill.
 GIBBS, GIBBS Boardtile, Commercial, Artistic, and Economy Boardtile, Gibbs Boardtile Corp., Chicago, Ill.
 GILSONITE, Barber Asphalt Corp., Barber, N. J.
 GIMCO, Rock Wool Insulating Products, General Insulating & Mfg. Co., Alexandria, Ind.
 GLASTONE, Glass-Faced Masonry Units, Libbey-Owens-Ford Glass Co., Toledo, Ohio.
 GLIDE, Door Hangers & Track, Frantz Mfg. Co., Sterling, Ill.
 GLIDE, Fireplaces and Grates, Superior Fireplace Co., Los Angeles, Calif.
 GMC Motor Trucks, General Motors Truck & Coach Division, Pontiac, Mich.
 GORILLA GRIPS, Solderless Mechanical Connectors, National Electric Prod. Corp., New York, N.Y.
 GRASSLITE, Silicate, E. I. du Pont de Nemours & Co., Grasse Chemicals Dept., Wilmington, Del.
 GRAYLITE, Fiber Tile and Wallboard, The Insulate Co., Minneapolis, Minn.
 GUIDE, Guide, Electric Hardware, Syracuse Guild Tool Co., Syracuse, N.Y.
 GUILDSANDER, Portable Electric Belt Sander, Syracuse Guild Tool Co., Syracuse, N.Y.

H

HANSO One-Hand Automatic Tacker, A. L. Hansen Mfg. Co., Chicago, Ill.
 HARBORSIDE, Plywood Siding, Harbor Plywood Corp., Hoquiam, Wash.
 HARBORD, Plywood, Sheathing, Doors; PLYCRETE Concrete Form Panels, Harbor Plywood Corp., Hoquiam, Wash.
 HARTLE, Exterior Plywood Panels, Harbor Plywood Corp., Hoquiam, Wash.
 HAWK SPREAD, White Lime Finish, Ohio Hydrate & Supply Co., Woodville, Ohio.
 HEAT-EX, White Lime Finish, Ohio Hydrate & Supply Co., Woodville, Ohio.
 HEATITATOR, Fireplace Units, Fireplace Baskets, Heatitator Co., Syracuse, N.Y.
 HERCULITE, Doors, Pittsburgh Plate Glass Co., Pittsburgh, Pa.
 HERBINGONE, Doublemesh Heat Lath, Truscon Steel Co., Youngstown, Ohio.
 HERZIM, Metal Mouldings, Heron-Zimmer Moulding Co., Detroit, Mich.
 HEX-CEL, Poultry Netting, American Steel & Wire Co., Cleveland, Ohio, Chicago and New York, N.Y.
 HILCO, "Hanson Sandy", "Chief", "Commander", Floor Surfacing Machines, Hilger Co., St. Cloud, Minn.
 HILCO, Track, Frantz Mfg. Co., Sterling, Ill.
 HOLLAND, Gas, Oil, and Stoker-Fired Furnaces, Holland Furnace Co., Holland, Mich.
 HOMASOTE, Building Board, Insulation Lath, Flooring, Etc., Homasote Co., Trenton, N.J.
 HOMELITE, Portable Electric Generators and Contractors Pumps, Homelite Corp., Fort Chester, N.Y.
 HOOSTER, Sectional Built-in Kitchen Cabinets, Side Cupboards, Tables and Sinks, Hooster Mfg. Co., New Castle, Ind.
 HOPE'S, HOPE'S, AUSTAL, Windows, Hope's Windows, Inc., Jamestown, N.Y.
 HOPE'S, Gas-Fired Automatic Water Heaters, Electric Automatic Water Heaters, Thermostats, Pressure Regulators, Furnace Coils and Electric Circulators, Hotstream Heater Co., Cleveland, Ohio.
 HOTSTREAM, Wall Insent Radiant Heaters, Hotstream Heater Co., Cleveland, Ohio.
 HUTHER, Band Saws, Circular Saws, Dado Heads, Planer and Jointer Knives, Sash Cutters, Ruther Bros. Saw Mfg. Co., Rochester, N.Y.
 HYDROCRIDE, Waterproofing and Dampproofing Products, L. Sonnenborn Sons, Inc., New York, N.Y.
 HY-RIB, Metal Lath, Truscon Steel Co., Youngstown, Ohio.

I

IDAHO WHITE PINE, Western Pine Assn., Portland, Ore.
 IN-A-DOE BED, Murphy Door Bed Co., New York, N.Y.
 INCOR, High Early Strength Portland Cement, Lone Star Cement Corp., New York, N.Y.
 INS-LITE, Building Board, Wall Board, Tile Board & Plank, Roof Insulation, Cold Storage Insulation, The Insulate Co., Minneapolis, Minn.
 IN-THE-DOOR, Farley & Loetscher Mfg. Co., Dubuque, Iowa.

J

JUNIOR OVER THE TOP, Door Equipment, Frantz Mfg. Co., Sterling, Ill.

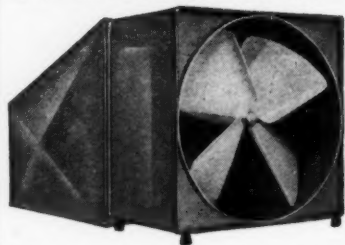
K

K-CEMO, Primer, U. S. Gypsum Co., Chicago, Ill.
 KENMAR, Copper Shingles, New Haven Copper Co., Seymour, Conn.
 KIMSUL, Expanding Blanket Insulation, Kimberly-Clark Corp., Chicago, Ill.
 KOLOITE, Pressed Red Cedar and Hand Split Shingles, Shingle Stain and Zinc Coated Nails, Weyerhaeuser Sales Co., St. Paul, Minn.
 KOLOR-TRIM, Mouldings, Wood Conversion Co., St. Paul, Minn.
 KORT KUTTER, Saw Rigs, Construction Machinery Co., Waterloo, Iowa.
 KUHN'S, Half-Round and Square Gutter, Lock Seam Roll Roofing, Milcor Steel Co., Milwaukee, Wis.
 KUMER, KUMER Evaporative Air Conditioning Equipment, Hall Mfg. Co., Cedar Rapids, Iowa.
 K-V HANDY-CLAMPS, Knap & Vogt Mfg. Co., Grand Rapids, Mich.
 K-VIENGNE, Clothes & Clog Finishes, Knap & Vogt Mfg. Co., Grand Rapids, Mich.
 KWIK-MIX, Concrete Mixers, Koehring Co., Milwaukee, Wis.

L

LAPIDOLITH, Liquid Concrete Floor Hardener, L. Sonnenborn Sons, Inc., New York, N.Y.
 LATITE, Shingles, Barber Asphalt Corp., Barber, N.J.
 LAUXLITE, Synthetic Resin Paint (Water), Laux Sales Co., Seattle, Wash.

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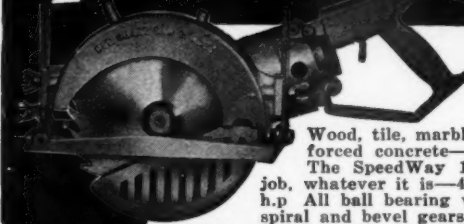
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